

MANUFACTURERS RECORD

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COVER ILLUSTRATION—Laboratory scene where carbon black is actually being compounded into rubber. The plates contain the various chemicals that are used in imparting long life and wearing qualities to tires.

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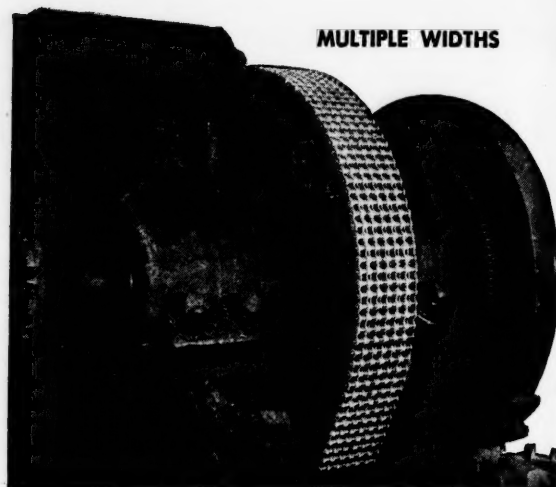
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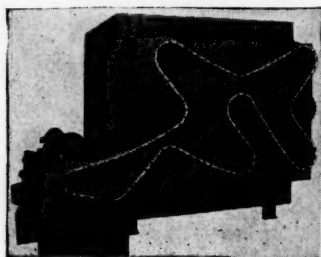
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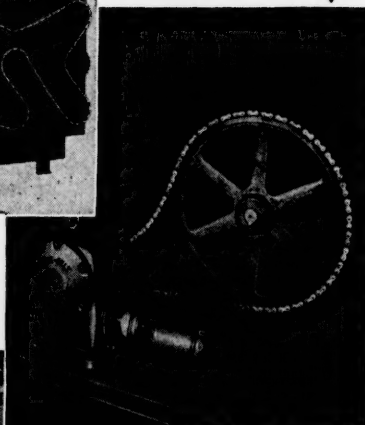
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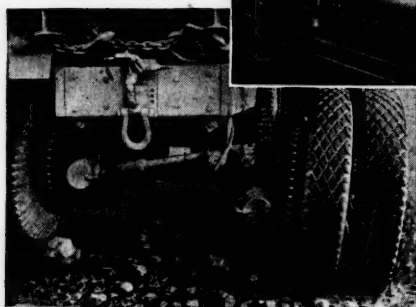
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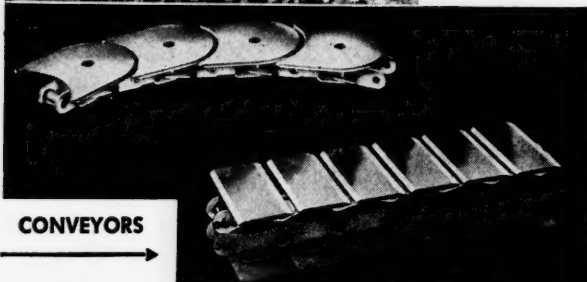
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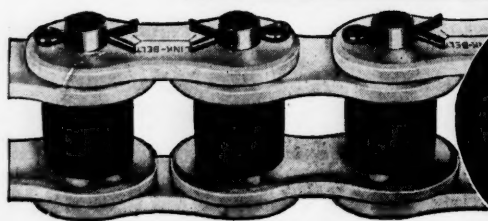
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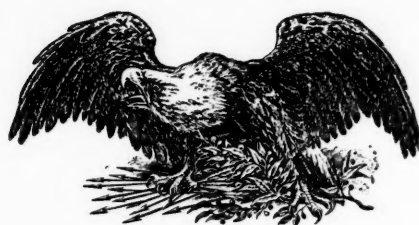
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"What Enriches the South Enriches the Nation"

AN EPISODE IN AMERICAN HISTORY

With the passing into the great beyond of Franklin Delano Roosevelt the United States and the world lost a great man. His friends and his foes—and they both were legion—admit that he was a great man. His death was much more than the passing of one man, even a great one. It marked the end of a social, political and economic episode in our nation's history that occurred and lived only because of and by his own personality.

Franklin D. Roosevelt and the New Deal were one and the same thing. The New Deal was not Mr. Roosevelt's brain child because it never was born. It remained a part of his constantly changing thoughts and emotions. It was the external contact of his personality with the political forces entrusted with the direction of our social and economic trends and vagaries. It, together with a remembrance of his personal charm will determine the location of his portrait in the gallery of national and world history.

Because Roosevelt was the New Deal it no longer exists. In its ever changing complexities no one except its owner knew what it was, and now, no one living knows what it is or what it may have been supposed to be. It was the public demonstration of

the private thoughts and decisions of one individual and as such was mortal.

The Rooseveltian episode in American history ended with the passing of its sponsor. There remains no great man to succeed him, no man great in the sense of personified emotional leadership. The public attitude that existed for more than twelve years that the President knows "what is best for us; he'll see that we are taken care of," is now replaced by a feeling in each one of us who make up the public that it is time to think and do for ourselves and to pool the best of our thoughts and acts to help the man who has inherited the chief responsibility for the national welfare. We want to help him, not to be helped by him.

This changed attitude of mind, this return to individual initiative, is the healthy, friendly and kindly reaction of real American people who are now showing themselves in their true colors. They want to roll up their sleeves and pitch in to help a sincere and humble President who, in the course of only a few short days, has proved to them that he welcomes their help because he feels that he is one of them, and with them asks for the guidance of God.

TOO LONG UNTOLD

The South and tradition have become all but synonymous. This conception is shared by the entire nation. It is not so universally recognized, however, that Southern tradition is rooted in virtues, that for all their homespun simplicity are time honored.

If a Southerner were asked of what these virtues consist, he would name them as forthrightness, the respect of each for the individual rights of others and conviction that man's destiny is sparked by an innate force called initiative.

If pressed farther he would describe forthrightness as the looking of both man and facts in the eye, the meeting of issues squarely and the refusal to cloak facts under ambiguous disguises. He would assert the belief that if Divine purpose had not intended man to act as an individual It would not have endowed him with an individual mind, soul and power to choose.

The native Southerner will also be ready with a confession. He will quickly admit that his faith has been so deeply rooted in what has become to him second nature that he has been blind to the interpretations that others have applied to Southern tradition. Yes, he has known that some envisioned the South as a medley of swamps, malaria and aborigines; that others conjured a land of incorrigible rebels; and still others bewailed the South as a region of poverty

amidst untold but undeveloped treasure, kept buried by carelessness and stupidity.

The true Southerner knows that the South has a real story to tell. The truth is that the South has accomplished what great nations of the earth find it impossible to do. After a ravaging war that sapped manpower and resources, it fought its way back to prosperity during days when there were no UNRRA, Lend-Lease or Rehabilitation projects. Against seemingly insuperable odds it recaptured a respected place among self-sustaining regions of the world without soliciting other aid than the sweat of its own brow and the vision of its own leaders.

Its stores of wealth do not lie buried. They are being developed. One-crop farming is giving way to diversification. Industrial expansion stands on the threshold of incredible growth. The South has developed skilled labor, skilled management and ample capital to use its great resources of raw materials in the favorable atmosphere of climatic clemency. It has at hand an abundance of electric power for productive purposes and excellent interlocking systems of transportation. It has that which is more important than any of these—the will to progress and the intelligence to direct its will.

The South owes to itself an obligation to tell its story to a national audience.

OPA vs INFLATION

The American public is on the horns of a dilemma. It faces a choice between two evils; one an indeterminate continuation of the restrictions placed upon it by the OPA and the other, the indefinite but greatly feared bogey man of inflation.

The inconveniences imposed upon us by the OPA and the inconsistencies and maladjustments of its administration are brought home to us every day (and we mean "home" literally as well as figuratively). The political philosophy of dictatorship that it represents, its exercise of control over supply and price can only be condoned by a free people in time of war or desperate national emergency.

The specter of inflation that most of us think is peering over our shoulders is a wraith which our most studious economists are unable to accurately define but which will materialize in any unrestricted market place when demand far exceeds supply. The memory of a five dollar potato still lives in the minds of Klondike gold seekers.

The post war problem with which we will be faced, and we may as well face it now, is whether the danger of possible uncontrollable inflation is great enough to warrant government control over the food we eat, the clothes we wear, the home we live in and the machines that make our way of life possible.

Most people, in fact all people who are not totalitarians at heart, think that OPA restrictions over the things that we must have in order to live should be lifted at the EARLIEST POSSIBLE MOMENT.

But when is that moment. It is inconceivable that it will be the same moment for every item whose distribution is now under government control.

This seems to eliminate the question of when restrictions should be lifted and leave us with the remaining problems how and how soon can each individual restriction be tossed into the waste basket of discarded war necessities.

Now that the war with Germany is ended the life of the OPA should be limited to a period ending six months after the physical termination of the war with Japan, and then if deemed advisable should be renewed for periods not to exceed six months per period thereafter. In this manner the extinction of OPA will be a problem kept always before the country until it joins the shades of other deceased alphabetical monstrosities.

Since it is a known fact that bureaucrats are never zealous in discarding useless things from the drawers of their bureaus, Congress should appoint a joint committee of both Houses whose duty it will be to recommend to the OPA complete relief from restrictions for individual commodities and products with authority to compel OPA to publicly state its case if such recommendations are not accepted and carried out within thirty days of the time they are submitted to it.

Public opinion, properly informed by facts instead of propaganda and with the intelligent guidance of Congress can gradually lay OPA in its final resting place alongside of the late unlamented NRA.

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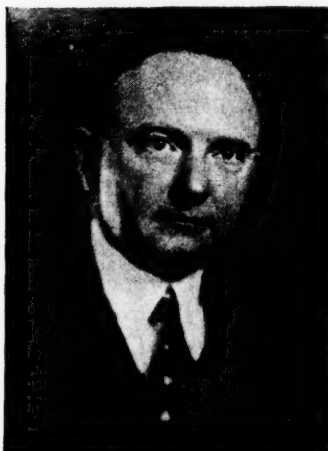
The Byrd Committee Reports

DEFINITE, direct savings of \$2,457,623,568 at a cost of only \$45,913 is the result to be found in the latest report of the Joint Committee on Reduction of Nonessential Expenditures of which Senator Harry F. Byrd of Virginia is chairman.

The report, entitled "Economy Progress Report of 1945," covers the period September 20, 1941 to January 1, 1945 and its operating results show that less than \$20 was spent for every million dollars saved.

The tremendous savings reported were developed through pruning non-essential government expenditures in both war and civilian activities, and are credited with playing an important role in curbing inflationary tendencies by deterring price increases. Explaining its incentive and purpose in this regard, the report states:

"Before the war the necessity for economy in nonessential spending was important. In total war it has become vital . . . During the war the federal government, particularly nonwar agencies, must of necessity marshal their money and manpower in an orderly and efficient manner. Every dollar now added to the public debt makes it more difficult for the nation to meet post-war problems in domestic and foreign trade. To preserve a democratic system of government calls for a preservation of a solvent government. National solvency should be the greatest concern of every citizen. The national income for the depression year ending December 31, 1930, amounted to \$68,900,000,000. For the year ending December 31, 1944, it more than doubled and reached the sum of \$160,700,000,000. Consequently, expenditures of the 'relief' and 'subsidy' type made directly or indirectly to individuals should have been promptly eliminated. Continuing them during the war requires a diversion of vital manpower and materials from war production. The Federal government exclusively must pay the cost of national defense. Therefore, it should concentrate on this task alone and carefully refrain from



Senator Harry Flood Byrd

undertaking financial plans to carry, in addition, the burdens and responsibilities historically belonging to state and local governments.

"The Committee recommended in its first report to the Congress and the President on December 24, 1941, that no new adventures or commitments in public works or costly government programs should be undertaken by the Federal government during the present war, except those imperatively necessary to national defense, and advised the various agencies in the executive branch as to the urgency of retrenchment in the appropriations of their existing nonessential activities."

One among the nonessential activities that came under the axe of the Byrd committee was the multi-fold issuance of government questionnaires. Savings resulting from this curb amounted to \$7,160,000. Other items were official car pooling by various agencies; restriction of competitive lending activities; effort to liquidate the Home Owners' Loan Corporation; reduction of unnecessary travel and excessive long distance calls; continuous demand for reduction of civilian employees on federal payrolls, numbering 3,000,000 or more; and demand for over-all control by the General Accounting Office of government corporations.

The report concludes with the statement:

"Common sense dictates that fiscal planning for normal peacetime requires a balanced national budget.

"The Committee admits that the sum of its efforts toward strict economy are insignificant compared to \$100,000,000,000 budgets. Even though there are few commendations for the thrifty, the Committee is convinced that its purpose is serviceful. It has full sympathy for the nation's tax-paying citizens who must be taxed to the degree that the government fails to restrict its expenditures. The Committee has revealed that at last government spending is being recognized for what it is—taxation.

"At the present rate of government spending, the public debt will reach \$292 billion by June 30, 1946. Reduction in the present debt, orderly, steady or otherwise, should not be precluded. Since taxes have increased, it is evident that additional tax burdens will tend to interfere with private expansion and expenditure and thereby cause an exodus from private industry to the public pay roll.

"What has been accomplished in savings so far is considerable but not enough. The federal debt which stood at \$48,961,443,536 on June 30, 1941, just prior to the present war, had reached the unprecedented height of \$235,123,061,109 on tax day March 15, 1945, including guaranteed obligations not owned by the Treasury.

"The Congress of the United States must continue to exercise strict control over federal expenditures, obtain tax relief for the nation's citizens and reduce this federal debt.

"The value of each employee, each bureau and each dollar expended must be conscientiously weighed in its relation to the welfare of the people. Spending practices which waste the financial resources of the nation must be eliminated. The Committee is confident that more nonessential expenditures can be cut out of the National Budget each year and that government spending

(Continued on page 60)



Left—Plates for LSM assembly being fabricated at Chattanooga.

Right—Sub
fighting v
Charleston

Below—Ot
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CHARLESTON YARD SUBCONTRACTS "PUDDLE JUMPER" PARTS

APPROXIMATELY fifty additional troop and tank carrying invasion ships are in action at Okinawa, Iwo Jima, the Philippines or at other recent Pacific beachheads, because "bridge makers" in Georgia, the Carolinas and other Southern states turned their inland shops into "shipbuilding yards."

These LSMs (landing ships, medium) were ready to supplement the invasion forces because of diligent work by employers and employees of inland steel plants, and because of the foresightedness of Naval of-

ficer at the Charleston Navy Yard who in early 1942 lined up little steel companies as shipbuilding subcontractors for the Navy and trained them in ship construction work.

When the shipbuilding chips were down, the former "bridge builders" sent subassembled prefabricated ships' sections speeding to Charleston over highway and rail from Atlanta, Chattanooga, Birmingham, Jacksonville, Greensboro, Columbia and even from mountainous Asheville.

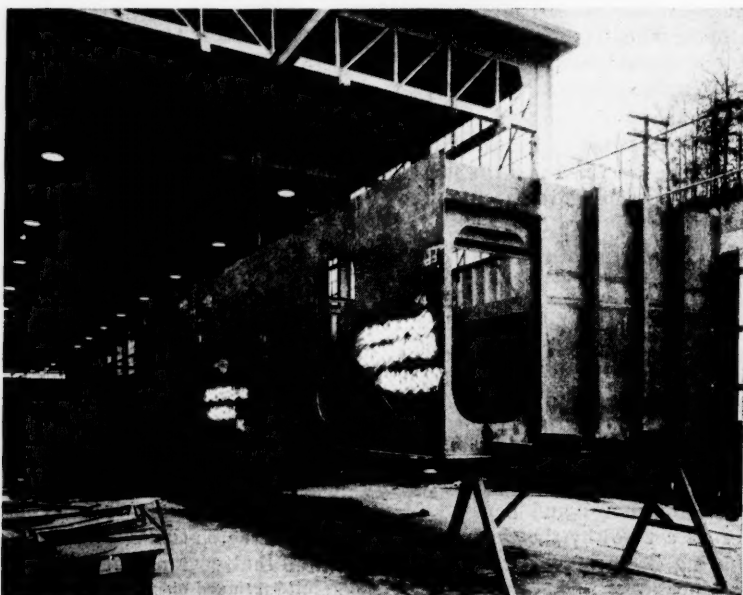
In crucial 1944, when landing ships for invasion were the priority naval vessels, the Charleston Navy Yard recruited men to the maximum extent possible in the critical labor market around the Charleston area, and undertook the largest shipbuilding program possible with the men and facilities not required for its large ship repair workload—but the navy department wanted more ships sooner.

Then it was that the subcontractors were called upon to again lend their facilities and swell the total number of landing ships that could be built in the time available.

These inland steel men were able to increase by fifty per cent the total monthly output of completed ships at the Charleston Navy Yard. Small plants, with from 15 to 60 men working on the navy contracts, fabricated more than 9,000,000 pounds of raw steel into ships' sections each month in 1944.

The job had been far from easy. The steel workers had to learn the tricks of their new type work before they could make ship sections to the Navy's rigid requirements. Most of them were structural steel workers—had been trained in working with riveted girders and angles. The shops were equipped for this type work, the bridge work, so to speak.

In ship construction, sheet metal work hogs most attention from girders and angles. Sixty per cent of the steel weight is in plates.



Left—LSM parts fabricated at a North Carolina steel plant.

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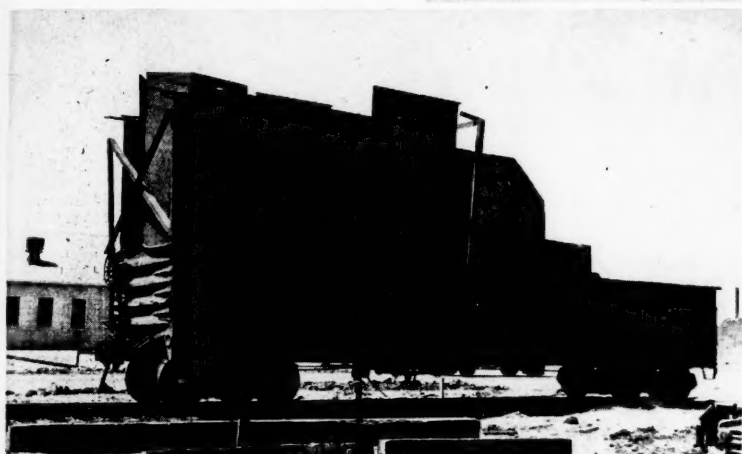
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Right—Sub-assembled sections for Navy fighting vessels are brought to the Charleston Navy Yard by barges pulled by tugs.



Below—Other sections assembled far inland were shipped by the small contractors via rail.

Bottom of page—Some sub-contractors shipped by truck. A special motor escort was provided.



Still another problem presented itself in those early days of 1942. Contractors were accustomed to working from shop dimensional drawings. Ship drawings are not dimensioned.

These inland shipbuilders, many of whom had never even seen a ship, much less built one, had to learn to work from templates which had to be matched exactly. This meant constant checking of templates to see that the dimensions remained exact. Weather has a way of changing them, drawing them up or expanding them.

Modern World War II warships are welded. The inland sub-contractors for the most part were equipped and manned for joining steel with rivets. Another new process, with all its ramifications, had to be learned and installed.

This meant securing welding machines, obtaining welders in a highly competitive market, and training new men and women. Every welder had to pass the Navy tests.

Most skilled workmen found they could make higher wages at the shipyards in the coastal cities. This added another burden to the dry land shipbuilders.

But, the Navy explained its vital need for ships and more ships to these Georgians, Carolinians and others, and they agreed to under-

take the job. The Navy promised all possible assistance.

The big lumbering, work-horses of invasion fleets—the LSTs (Landing Ships, Tank)—were the first ships on which these Southerners began their inland construction. The LST was a new type ship to the Navy as well as to the structural steel workers.

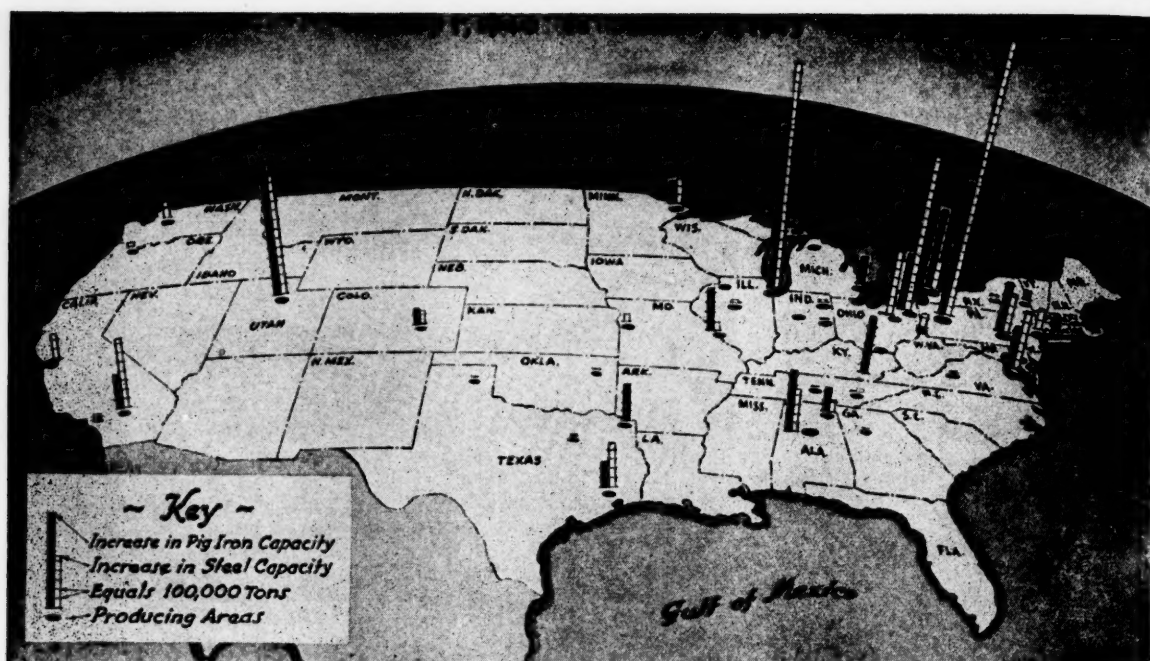
These inland shipbuilders soon found that dealing with steel plates took four or five times as long as working with the beams, angles and rivets to which they were accustomed.

Scattered throughout the Southland were little plants with their 15 to 60 men all working on a different section of the LST. They had a schedule to meet. All sections had to arrive at the Charleston Navy Yard at a prearranged time to keep the ships moving on the ways.

Trial and error had its place, too, but the Southerners learned

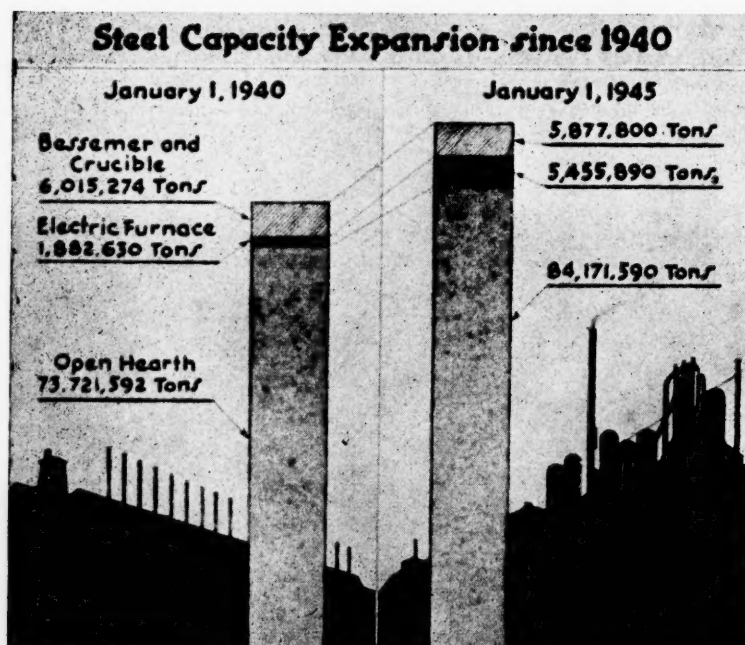
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In the past five years, the annual steelmaking capacity of this country has been increased by nearly 14,000,000 tons—almost as much as the total steel capacity of Great Britain when the war began. Capacity of the American steel industry now stands at over 95,500,000 tons per year. The map above and the chart below show how steel capacity has expanded during the war period.

Steel Industry's Capacity Over 95,500,000 Tons



PRODUCTIVE capacity of the steel industry of the United States as of January 1, 1945 was rated at 95,505,280 tons of ingots and castings per year. Marking the virtual conclusion of the industry's huge wartime expansion program, that figure is nearly 1,500,000 tons greater than the annual capacity of 94,054,550 tons reported in mid-year 1944.

Blast furnace capacity for the producing of pig iron and ferro-alloys at the start of 1945 was 67,313,890 tons. This was a decline from the 68,446,310 tons reported July 1, 1944, and was caused largely by the abandonment or dismantling of certain furnaces not now economic to operate. The present blast furnace capacity, however, is a net gain of 11,600,000 tons over 1940.

Open hearth steel capacity was rated at 84,171,590 tons annually at the start of 1945, a gain of nearly 1,600,000 tons from the 82,604,600 tons as of July 1.

Electric furnace capacity increased 83,740 tons from July 1, 1944 to January 1, 1945, capacity of these facilities now being rated at 5,455,890 tons.

The capacity of Bessemer steel declined slightly during the last half of 1944, now being rated at 5,874,000 tons annually, about the same as in 1940.—*Steel Facts*.

Cottonseed — success story

of a former troublesome waste

THREE-SCORE years ago cottonseed was a troublesome waste about southern gin yards. The mounds of rotting seed created an unpleasant stench, and were a lethal poison to the hogs of the open ranges. Not until 1899 were scientists to discover and isolate the small quantities of poisonous phenolic gossypol in the raw seed, and to prove that it was rendered harmless by the boiling process incidental to extraction of the oil in the crushing mills.

PAUPER TO PRINCE

Reversing the traditional formula, cottonseed has grown from pauper to prince within the memory of living men. As a source of food, feed, fabric, and fertilizer its annual cash value in 1943 had reached \$297,888,000.

As a by-product cottonseed is in the fortunate position of having no separable cost-of-production charge. Its value, therefore, serves to reduce the cost of producing lint. To illustrate: the 1942-43 crop cost 16.1 cents per pound to produce—counting preparation, planting, cultivation, harvesting, fertilizer, seed, ginning, land rent, and other miscellaneous expenses—but after the value of the seed was deducted the cost of producing the lint was only 12.1 cents per pound. This calculation is based on the estimated yield of 284 pounds of lint per acre for the upland varieties at a cost of \$45.82 per acre, with a credit of \$11.42 per acre for the seed.

The classification of cottonseed as a "by-product" seems rational when it is observed as totaling only slightly more than 24 per cent of the value of the lint; but when compared with the value of other major crops for the same year the term "by-product" seems an abasement. The cash value of the Nation's cottonseed products for 1943 was nearly a third that of wheat, more than 42 per cent that of corn, and far in excess of the combined value of the rice and oats crops.

FOUR PRODUCTS IN ONE

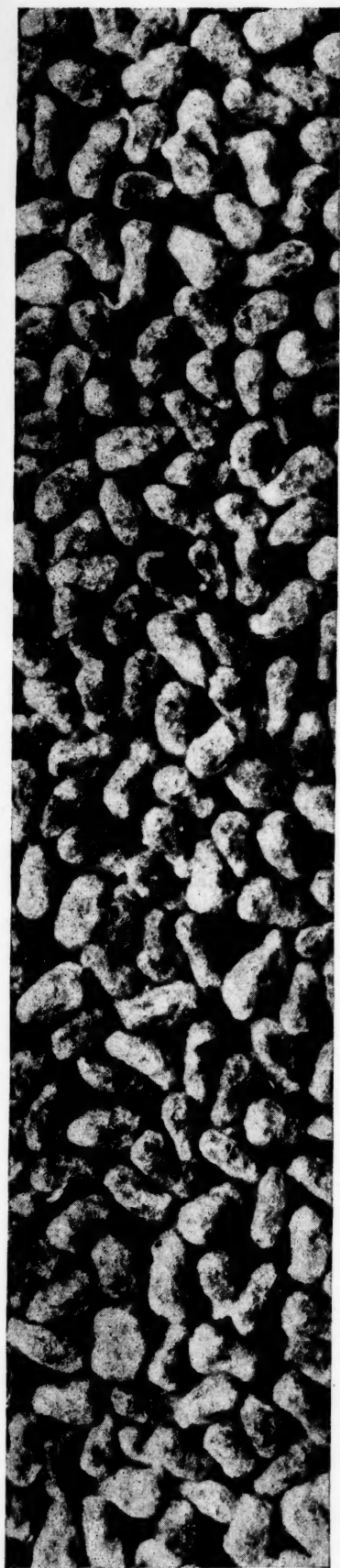
Cottonseed, after separation from the lint in the gins, is usually handled no further by the grower but is left with the ginner who acts as agent or baillee for the purchaser, of one of the cotton oil mills. After the seed has reached one of the country's 394 oil mills, or crushing plants it is processed by special machinery for removing the coating of short lint which the gins left adhering to the seed. The fiber thus removed is known as linters. Thereafter the hulls are removed, leaving the meats or kernels, which in turn are passed through heavy rollers, then cooked, and finally placed under high pressure. The presses separate the oil from the residue which is known as cake, or cottonseed meal. Of the four products into which cottonseed is separated by the crusher: linters, hulls, meal, and oil, the last has the highest cash value, amounting to 53.9 per cent of the total.

COTTON OIL AS A FOOD

The crude oil from the presses is reprocessed into refined oil for human consumption. It is then ready to be used as a cooking oil; but the practice is to take it through one or more further processes, including hydrogenation to give it the appearance and consistency of natural lard. While cottonseed oil has a variety of other commercial uses, as for cosmetics, soaps, paints, linoleums, water-proofing, and medicines, these are small as compared with the volume used in cooking, and for salads, mayonnaise, and margerines.

As a cooking fat cottonseed oil looms high above all others, far exceeding in volume its competing vegetable oils such as peanut, corn, soy bean, and olive oil; and being five times as high in volume of consumption as hog lard.

The accompanying table indicates the relative consumption of the
(Continued on next page)



Cottonseed

different cooking fats in January and February, 1945, as compared with a similar period within the last quarter of the year 1939.

Kind	Consumption	
	Nov., Dec. 1939	Jan., Feb. 1945
	Pounds	Pounds
Cottonseed	206,408,818	209,442,000
Peanut	1,037,158	12,397,000
Corn	3,091,592	7,556,000
Soybean	989,358	160,096,000
Olive	430,218	25,000
Lard	8,581,174	36,559,000

It is evident from this comparison that while other sources have greatly expanded in consumption under the war economy, cottonseed oil has remained static just as cotton production has remained frozen under the Government policy of limitation by subsidies. While such subsidies have operated to enable peanut oil and soybean oil to rise to fill the gap the wartime shortage of fats has still remained notably acute.

COTTONSEED AS FEED AND FERTILIZER

After crude cottonseed oil has been removed under pressure of 4-200 pounds per square inch there is removed from the presses solid slabs of cottonseed cake. These may be reduced by grinding to cottonseed meal or processed into pellets known as cake. Fed to livestock either as meal or cake, or used as commercial fertilizer, this portion of the cottonseed accounts for 30.8 per cent of the total value of cottonseed products.

High in nitrogen, cottonseed meal has been an important ingredient of commercial fertilizers. The major portion of cottonseed meal and cake is used as feed for cattle, poultry, swine, sheep, horses and mules. To a small but increasing extent it is used as a cooking flour which is low in starch and high in protein and vitamin-B, for bread, cake, and crackers.

Because cottonseed meal, as a fine fluffy powder, is easily wasted in feeding and is to some extent drawn into the respiratory tracts of cattle, it is yielding in popularity to the cake, or pellet form. The latter form appears to appeal to the animal's fondness for chewing.

COTTONSEED IN FABRICS

The linters removed from cottonseed account for about 10.2 per cent of the total value; and the hulls, about 5.1 per cent. Linters enter into the manufacture of cotton batting, wadding, stuffing materials, felt, absorbent cotton, low-grade yarns, and cellulose. In the last named form, linters are transformed into such things as writing paper, guncotton, smokeless powder, plastics, photographic films, artificial silk and leather, celluloid, and varnishes.

The hulls, in addition to having some utility as feed and fertilizer, are also used as packing and stuffing material; and more recently as furfural in the manufacture of synthetic rubber.

THE POST-WAR OUTLOOK

Because cottonseed products in their several forms, linters, oil, meal, and hulls, face close competition from a number of other domestic and foreign products, their price is largely a demand-determined price; or was, in peacetime. Just what part demand has played under wartime price control may not be known until the extent of black market operations has been revealed.

An incident is related here for the light it throws on the "accuracy" of Government control, as well as upon the high demand for one of the cottonseed products. Last year when a free-lance trucker operating between the cotton area of West Texas and the rugged ranch country of Eastern New Mexico was questioned about his suspected black-market operations in cottonseed cake, he avoided self-incrimination and at the same time revealed this rather astonishing picture: The government ceiling on cottonseed cake was so low as to drive it from the legitimate market. Cattlemen fearful of losing whole herds of cattle under the weight of icy blizzards, and well-knowing that a few pounds of cake per head would supply the necessary stamina for resistance and survival, were willing to pay the black-market price for cottonseed cake, fifty per cent higher than the ceiling price. Aside from the necessity of their situation, they regarded the black-market price as more nearly equitable; because,

whereas in pre-war days they had been able to purchase a ton of cake with the price of "three heifer calves" at pre-war cattle prices, they were now able to purchase a ton of black-market cake with the current price of one heifer calf! This trucker's version was checked and fully verified by responsible businessmen in the cattle area.

The quality of cottonseed is highly variable and non-predictable. There is no uniformity in its oil content or its water content, even from the same land at different periods in the same season, or in different seasons.

Except for such variants the price of cottonseed is closely tied to its competing sources of vegetable oils. Naturally its supply is closely tied to the supply of cotton which in turn is controlled by Government policy.

Opportunities for expansion of cottonseed production, therefore, is identical with the opportunity to be afforded cotton as a whole. Consumption will keep pace with production. It is axiomatic that the tastes of the people operate in cycles. One of the encouraging signs for the future of vegetable oils is the likelihood of expansion of consumption of the margerines. The war has given many persons a favorable acquaintance with butter substitutes. Dieticians are advising the greater consumption of whole milk, which ultimately leads to less butter, and the demand for more butter substitutes. Cottonseed oil lends itself admirably to use as a margerine because it may be cut into pats at refrigerator temperature, holds its form at room temperature, and melts on the tongue at body temperature so as to impart no greasy or sticky effect.

Linters for cellulose and hulls for furfural should be more and more in demand in the era of increased production of synthetic rubber and plastics.

Soil conservation is the concern of all who think in terms of agricultural economy. The significance of cottonseed in this problem is aptly stated by Earle L. Bauber in the *Monthly Review* issued by Federal Reserve Bank, Atlanta; for March, 1945. Mr. Bauber says:

"Cotton has long been decried as
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North Carolina—CENTER OF NATION'S CIGARETTE PRODUCTION

MANUFACTURE of cigarette paper, heretofore largely imported from abroad, has taken firm root in the Blue Ridge foot hills of western North Carolina on the banks of the Davidson River, and thus makes the United States independent of foreign lands for millions of dollars worth of the delicate, tough tissue annually. The enterprise is typical of American initiative and one that will play an important part in the economy of the South.

It is a fact that but for this one enterprise the tobacco industry would not be able to supply the

cigarette needs of our Armed forces, let alone the far greater civilian demand. A quick view of the economic significance is gained when we realize Federal excise taxes on cigarettes amounted to \$835,230,773 in 1943.

Just a little more than five years ago, Harry H. Straus, president of this new enterprise, the Ecusta Paper Corporation, and who was instrumental in developing the industry in France, ended a long search for chemically pure water, essential to the manufacture of a quality product. His quest ended on the banks of the Davidson River, which

comes tumbling out of Pisgah National Forest. This, in the very heart of our tobacco manufacturing industry, is a doubly fortunate find.

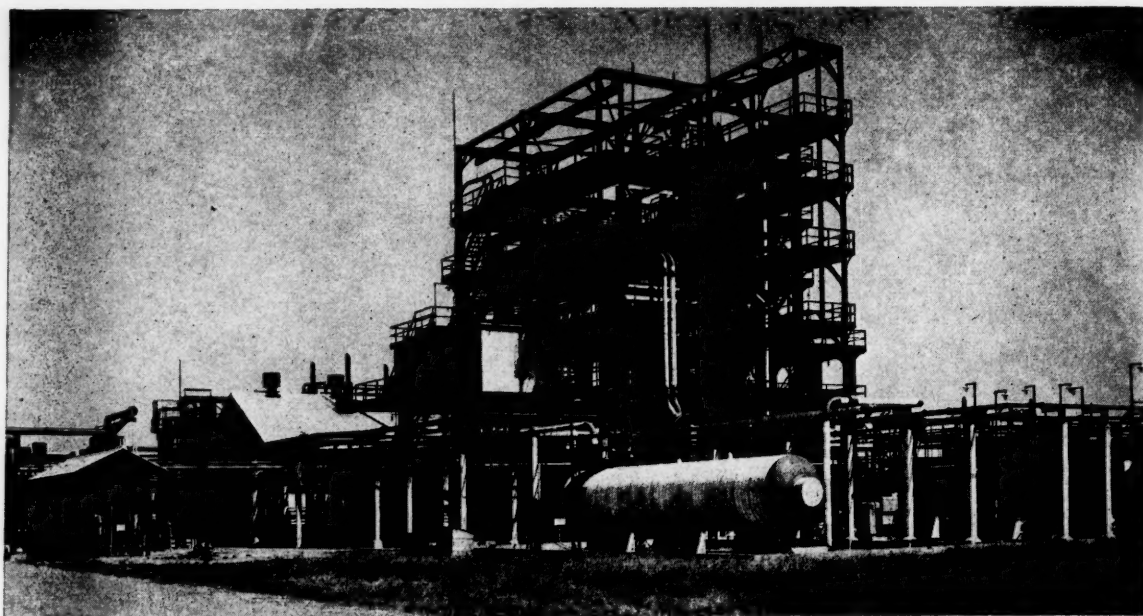
In August, 1939, the first cigarette paper was made in the newly-completed plant and just in time. When the Nazis marched into Poland, 90 per cent of the cigarette paper used in this country was being imported from France. Subsequent rapid expansion of the plant has saved the cigarette industry from death by a pretty terrifying margin, at the same time assuring American smokers freedom from paper imports.

Many technical problems confronted the new operation. Cigarette paper must be pure white and opaque; completely tasteless—directly and when burning; must burn at the same rate as the tobacco; be thinner than the diameter of a human hair, yet elastic and strong; must not stick to the lip, yet must be sufficiently moisture resistant so the cigarette will not become soggy.

Long, painstaking research pointed to flax fibre as the best raw material for the manufacture of cigarette and other fine papers, but at that time flax was not plentiful in this country, nor of the quality needed. As early as 1934, experiments with flax had been started in nearby South Carolina. Careful cultivation and experimentation brought forth a flax to match any that is grown in foreign countries. Today the Ecusta people have in their warehouses sufficient native flax to operate for a full year. Cultivation of the fibre in adjacent counties assures a constant supply

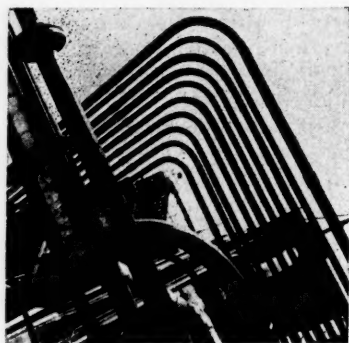
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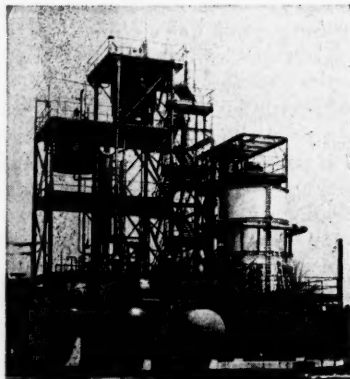
An ethylene process ethyl chloride plant at Baton Rouge.

BATON ROUGE PLANT TO PRODUCE ETHYL CHLORIDE BY NEW PROCESS



Above—Ethylene towers.

Below—Acid re-concentrator and dehydrator



\$750,000 being spent for unit by Ethyl Corporation

A NEW process for making ethyl chloride, one of the most important chemicals used in manufacturing Ethyl fluid to produce high octane gasoline powering allied air fleets on the world's battlefronts, is announced by Ethyl Corporation. A \$750,000.00 unit employing this process is now under construction at the company's Baton Rouge, La. plant.

The process yields ethyl chloride by reacting chlorine with waste products from one of the present ethyl chloride units at Baton Rouge. It was developed in view of the "tight" supplies of both alcohol and ethylene, compounds used in producing ethyl chloride, through two present processes.

The principal use of ethyl is in making tetraethyl lead by combining it with an alloy of lead and sodium. Tetraethyl lead comprises about two-thirds of Ethyl fluid and

does the work in taking out the "knock" in gasoline.

Ethyl chloride also is used in dentistry as an anesthetic on abscessed gums, as a general anesthetic in short operations with the advantage of no after-effects, in producing ethyl cellulose which is the basis for certain plastics, as a catalyst in synthetic rubber manufacture, as a constituent of cognac essence and sometimes as a refrigerant.

Because of the enormous amounts used in making tetraethyl lead, Ethyl Corporation is the world's largest producer and consumer of this chemical compound.

Chlorine for the new process is produced by breaking salt electrically into chlorine and sodium. The sodium from this electrolysis is combined with metallic lead to form a lead-sodium alloy used in making tetraethyl lead.

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The two methods already in operation for making ethyl chloride are based (1) on the hydrochlorination of alcohol, and (2) on the hydrochloric acid combine in the presence of a catalyst to form ethyl chloride and water.

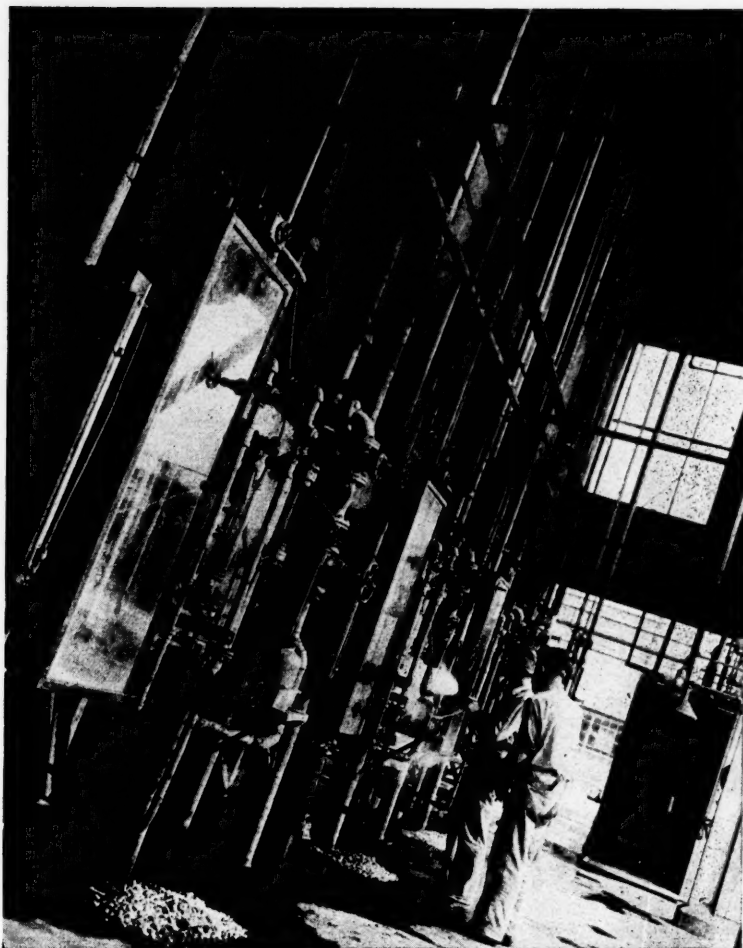
In the ethylene process, ethylene gas is mixed with hydrogen chloride in the presence of a catalyst. The two gases first are passed through a reactor where hydrochlorination occurs, and later through a "flash drum" which distills off the lighter ethyl chloride fractions, leaving the heavier polymer fractions. The ethyl chloride then is purified by fractionation. The first of two plants using the ethylene process was built in 1939.

The new process was developed because of increasing wartime demands for raw materials. Before the war, Ethyl Corporation converted all the chlorine from electrolysis of salt to hydrogen chloride to make ethyl chloride, and bought additional amounts of chlorine elsewhere. Due to rising wartime demands for tetraethyl lead and for chlorine in other uses, the company overproduced sodium in 1941 to obtain more chlorine, discontinuing open market purchases of chlorine, and storing the surplus sodium.

When nationwide chlorine supplies became critically short, Ethyl Corporation expanded its plant facilities to substitute hydrochloric acid for chlorine, producing the hydrochloric acid from sulphuric acid and common salt.

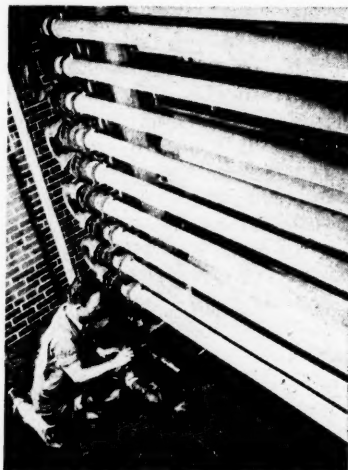
The ethyl alcohol, used in making detonating powders and butadiene for synthetic rubber, came increasingly into demand. Construction of a second ethylene plant at Baton Rouge for the production of ethyl chloride helped to relieve the supply situation in ethyl alcohol.

As the war progressed, supplies of ethylene in the Baton Rouge area became inadequate in meeting the continuously increasing demands for ethyl chloride needed to manufacture Ethyl fluid for the war effort. When the new plant is in production, Ethyl Corporation expects to meet all increased requirements for ethyl chloride for tetraethyl lead without additional drain upon available supplies of alcohol or ethylene.



Above — HCL burners in the alcohol process ethyl chloride plant.

Below—Coolers in the plant, which is being augmented by a new \$750,000 unit to yield ethyl chloride by reacting chlorine with waste products.



City Surveys Indicate Wider Trolley Use After War

Transportation may depend more extensively upon electric trolley coaches—the so-called trackless trolleys—in the postwar era when speedy, comfortable intracity travel will become a focal point in industrial areas particularly.

Modernization of city transit systems after V-Day, according to electrical manufacturers, will emphasize use of means that will cause a minimum of congestion in streets, abate noise and fumes, provide smooth riding and handle large numbers of passengers.

It is pointed out that the trackless trolley coach has shown a 1,628 per cent increase in passengers carried since 1934. In 1943 alone, the 3,000 coaches in operation transported 1,175,000,000 passengers. Meantime, a transit survey in twenty key cities indicates the coach has won public favor.

The Seattle transit system made a change-over in 1941 (shortly before Pearl Harbor) to coaches and motor buses. As a result, the city reports that it has been able to handle adequately a wartime traffic double that normally anticipated. This operation, showing almost a million dollar annual deficit in prewar years, brought in a two million dollar surplus by 1943.



SOUTHERN TUNG OIL— war stresses its value

PRODUCTION of American tung oil, the important drying ingredient used in varnishes, insulating compounds, printing ink, waterproofing and for such products as linoleum and ordinary table oil-cloth, will total between 10,000,000 and 11,000,000 pounds this year, or about one-twelfth of the country's average imports up to beginning of the Japanese-Chinese war in 1938.

Cultivation of the tung nut tree, or as it's known in its principal oriental habitat, the China wood oil tree, is concentrated in the southern area of the United States where the Department of Agriculture regards the industry important enough to maintain four field laboratories and this year plans to release several varieties expected to yield from two to four per cent more oil in the fruit than the average seedling tree.

Imports of tung oil have varied considerably. The average as given out by government authorities was

about 120,000,000 pounds yearly. Japanese aggression in the orient had greatly reduced this figure. Imports of the oil in 1939 totaled 78,717,634 pounds; in 1940, 97,048,595 pounds. The price has ranged as low as 5.1 cents and as high as 39 cents per pound.

Tung orchards in the United States date back to the twenties but it was not until after 1930 that public interest was focused on tung oil. The number of trees in the United States at the time of the last census was 12,671,544. The largest number—9,481,143—were in Mississippi. Louisiana, the next most important tung oil state, had 1,758,819 trees; Florida, 1,208,764. The total number of trees had increased between three and four times within five years up to 1940.

First tung seeds were received in this country forty years ago. These were planted in the Department of Agriculture's plant introduction

gardens and seedlings afterward distributed to various cooperators. Several trees went to Florida and in 1906 five were planted on the nearby Raynes plantation. One of these lived until August 1940. The prolific yield of the "Raynes tree" resulted in the first commercial grove in the United States, a four-acre planting set out in 1912 in Tallahassee.

The United Tung Growers Association emphasizes that growing tung trees is not by any means a cinch. According to Marshall Ballard, Jr., Secretary of that organization, there are many problems both in cultivating the trees and in preparing the fruit for the mill and the oil for the market. No grower, he says, waits for the nuts to fall and then collects his money. Constant care and continued research are necessary both in cultivation of the trees and extraction of the oil.

Field laboratories are maintained by the Department of Agriculture at Gainesville, Fla., Cairo, Ga., Fairhope, Ala., and Bogalusa, La. Three are in the major producing states of the tung belt. When the investigations were started, the tung indus-

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try in the United States was on a seedling basis, with a high proportion of the trees in the orchards poor producers and yielding fruit of low oil content.

The experiment stations, tung growers say, have done much in advancing the industry. Actual planting and caring for the trees are matters for expert advice. Both soil and climate are important to successful planting. Best results have been observed on the sandy loam soils. Tung trees require an annual rainfall of about 4 inches. The trees are hardy after reaching maturity. Healthy, well-nourished trees can even exist at freezing temperatures.

Some cold weather seems necessary to tung tree growth. Late frosts are not dangerous, but may kill the blossoms and thus destroy the crop for the year in which the frost occurs. Unduly warm weather in January and February causes the sap to rise prematurely, resulting in earlier blossoming and peril from cold. Normally cool weather in the year's first two months is desirable.

The tung tree grows rapidly with spreading low branches. Its height is seldom more than 20 or 40 feet. Its trunk varies from six to 12 inches in diameter. The "Raynes tree," ancestor of the southern orchards, was about 35 feet high and had a trunk circumference of 5.29 feet. It died following its removal from the right-of-way for a new highway. The white wood of the tree is covered by a pale gray bark.

Tung trees have a low branching growth. Pruning is generally necessary to produce a comparatively straight central trunk. They are deciduous and shed their leaves in October and November. The large, dark green leaves are heart shaped. The flowers, which appear before the leaves, are white with pink centers. The clusters droop and the foliage is dense.

Tung fruit contains the nut from which the oil is extracted. This fruit has been described as about the size and appearance of a russet apple, although it is creased by a series of wrinkles that radiate from the top. Color of the fruit is first a dark olive green. As maturity is reached, this sometimes turns to a deep brown. Fully ripe fruit falls and occasionally bursts open from the base upwards, exposing three, five, or in

some cases, seven seeds resembling the triangular Brazil nut in shape and color, but of smaller size. October and November are the ripening months.

Introduction of tung oil into the United States resulted in a revolution in manufacture of varnishes and other important products of the paint varnish industry, according to the National Paint, Varnish and Lacquer Association. When the oil became commercially available, studies showed the oil could be used in combination with American rosin to make varnish equal and in some respects superior to those employing imported fossil gums. Development since has been in this direction, using the rosin esters or synthetic resins.

Paint and varnish authorities point out that the Chinese use tung oil primarily as a waterproofing for wood and other materials. It is the principal paint oil in China and is also used as an ingredient in waterproofing masonry in that far-eastern country. Chinese junks are oiled regularly with tung oil and are calked with a mixture of the oil, lime and chopped hemp. Added to native lacquer, tung oil darkens its color and quickens drying. The oil is also used for dressing leather, for varnishing furniture and floors and when burned to soot, as a finely divided carbon from which the Chinese make India ink.

Tung trees in China are reported to live for 30 years when planted in fertile soil. On the infertile soils where they are commonly grown and facing hazard of soil erosion, the trees average a life span of about 20 years. The trees usually begin to bear fruit about the third year from seed and should be full bearing by the sixth or seventh year. Fruits are produced only from the female flowers.

Sometimes the fruits vary in shape from an apple to that of a top, a pear or a tomato. When the seeds in each exceeds seven or eight, their size is correspondingly smaller. Ordinarily, the seeds vary in size from about three-quarters of an inch or more in length and have a diameter of about one-half to more than three-quarters of an inch. From 85 to 200 seeds are required to weigh one pound. The kernel inside the Brazil-like nut is like that of a castor bean.



Above—The tung flower.

Below—The tung fruit.



Below—Parts of the tung fruit, including the outer hull, inner hull.



Experience has shown that areas for successful commercial culture of the tung tree in the United States are limited to a narrow strip about 100 miles wide along the Gulf Coast and including the northern third of Florida and the southern third of Georgia. The Pacific Coast and southwestern regions are practically excluded because of deficiency of rainfall. The more northern parts of the southwest are uncertain for tung

(Continued on page 72)

JUST AMONG US SOUTHERNERS

THE South has been advertised favorably for the graciousness and hospitality of its people and its large contribution to our national history. We have also suffered the unfair picturizations of "Tobacco Road," "Strange Fruit," and certain sensational publicity, politically activated, none of which reflects the true character of a majority of its people.

For the greater part of two centuries King Cotton has ruled what has been our chief industry, agriculture. Our economic relations until the War Between the States were in balance with other sections of the nation and the world—mainly because cotton growing was profitable and we could buy manufactured goods at reasonable prices. The destruction of that pre-war economy, based on slave labor, was followed in rapid succession by soil erosion, the rapid rise of industrial costs elsewhere in the nation, the boll-weevil and the ultimate breakdown of agriculture after World War I. The subsequent and transitory devices of restricted production, price controls and subsidies do not belong legitimately to our postwar plans.

We still have an impressive list of attractive capital assets on which to build the South of tomorrow: our climate offers lower production costs in industry, longer growing seasons in agriculture, lower costs in housing, food, and clothing. Our people are more than 95 per cent native born. The industrial developer finds them friendly and cooperative. Our natural resources, timber and minerals, including oil and natural gas, are abundant and relatively undeveloped. Industries, particularly in textiles, paper manufacture, lumbering, furniture making, and oil refining are well established but require great expansion to balance industry with agriculture. Our capital in the form of securities and bank balances has greatly increased and the South is well able to finance its own business ventures.

But the South has its liabilities, facts of which we cannot be proud, but which nevertheless must be taken into account and treated

by
Robert Strickland •
President
Trust Company of Georgia

frankly in our efforts to make progress. The South is relatively poor, embracing approximately the lower third of the forty-eight states listed according to average per capita income. Georgia, for instance, although sixth from the bottom of the list has an average per capita income of \$498, whereas the average for the nation is \$852. Especially does the southern tenant farmer, white or negro, have a low income; and, on the whole, his farm home is relatively devoid of modern conveniences. For the most part these conditions are closely related to the general lack of technical skill. Cotton growing has ceased to be profitable for large areas of the South, and cannot be sustained indefinitely by subsidies. Small farms with their dependence upon hand and mule cultivation, and hand harvesting, cannot compete in the future with machine-cultivated and machine-harvested crops of the larger plantations of the river valleys and the southwest plains.

The foregoing statements and generalizations are based on 1940 census reports. Rapid changes are already in operation. Crop diversification is receiving great emphasis. Small grain crops of the South already are a large factor in the nation's food and feed supply; in addition they support cattle raising and dairy farming. Industrial development, while checked and regulated by the rules of a war economy, has made progress. Greater development must be our aim for the postwar period. We cannot afford to do our purchasing of finished goods from other industrial sections. We must not be content with the more simple processes and lower values of our industries which partially process but do not finish the manufacture of numerous southern materials. So long as we purchase elsewhere the finished

products from our own raw materials we are missing the opportunity to furnish industrial jobs to our own people.

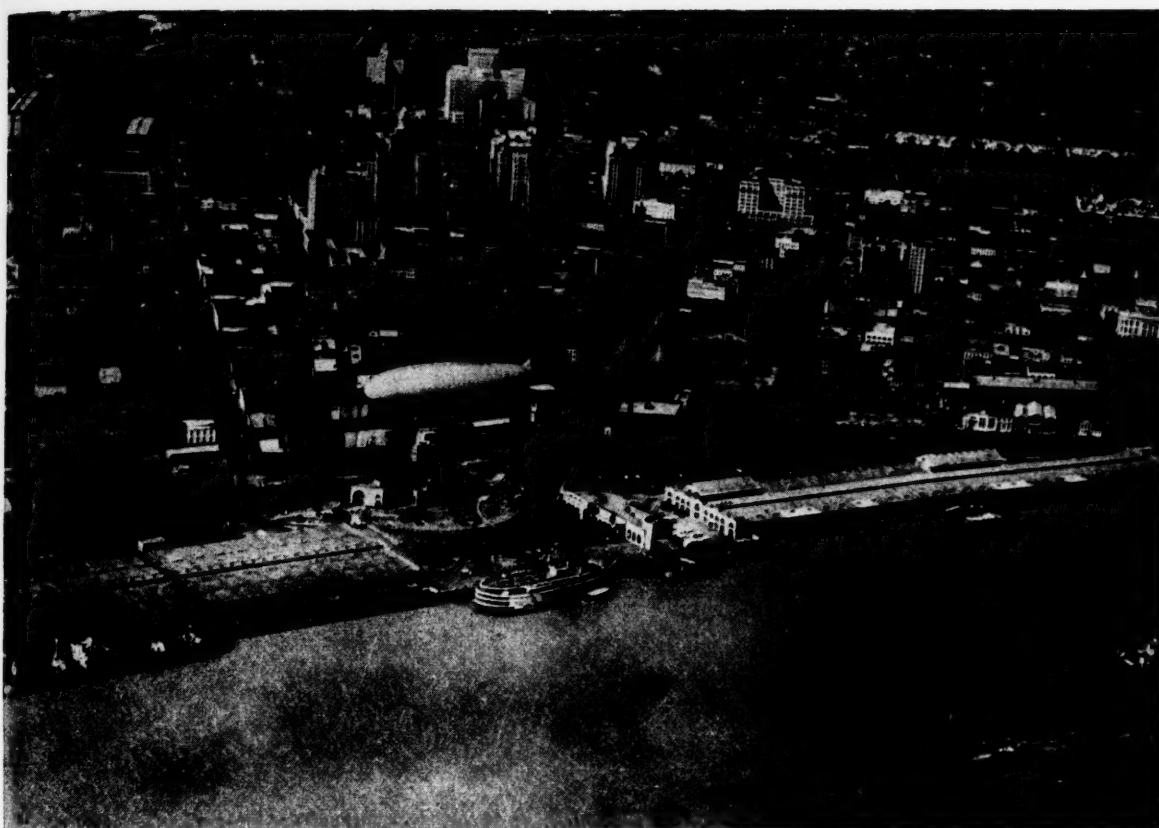
The returning soldiers of both races will be found to have developed new skills in the course of their military training. The utilization of such new skills must be planned by those who are drawing the blueprints for the immediate future. Our educational system must provide for the further development of industrial skills amongst all our people. Agricultural and development boards comparable to that of the state of Georgia can perform a useful service by organizing local surveys to determine job-making possibilities.

One such possibility, for example, grew out of a realization on the part of the people of Dawson, Georgia, that they could not afford to be content merely with shelling and shipping their peanuts to other sections for further processing into food. The result is Cinderella Foods at Dawson—built within sixteen months under wartime conditions and now employing several hundred persons, processing local peanuts into peanut butter for shipment into 39 states. There are similar opportunities in every community of the South.

Agricultural and industrial programs will require the active interest of our business men and bankers. Credit needs will not be easily solved in some cases. Nor will the extension of credit alone suffice in many cases. New industries will sometimes need the guidance and direction of business groups. Financial backers must be men of vision who can see beyond the outlook for immediate dividends the cumulative community benefits which will produce ample cash dividends in the future.

We Southerners know our assets and we know our liabilities. We know we can cure our shortcomings by education and aggressive training. We can correct any local laws that may appear to discriminate against business. We can revitalize our agriculture. We can create and manage industries in our own com-

(Continued on page 70)



New Orleans from the foot of Canal Street.

Port of New Orleans Booms

by
Mary Geffs

THE Port of New Orleans is today, experiencing one of the greatest movements of Army, Navy and commercial cargo since the Louisiana Purchase in 1812 by Thomas Jefferson.

Perhaps one of the most important factors in the recent increase in trade at the Port, is the fact that the Army chose it as a Port of Embarkation, and the Navy is using it as a supply depot.

Ideally located, almost at the mouth of the Mississippi River, New Orleans is also a focal point for all inland water traffic. Tanks and other cargo pertaining to the war, can be shipped down the Mississippi on barges from Chicago and other cities, and loaded onto freight cars from the barges, right at the wharves.

Ships, not fully ready for sea duty are also navigated down the River and completed in shipyards here, then are sent to their points

of destination.

A publicly owned and operated Port since 1901, New Orleans owns seven miles of wharves and facilities which have been provided by the Board of Commissioners of the Port of New Orleans; five and one-half miles of which, are covered with modern steel sheds. They also offer for use, a terminal grain elevator, having a storage capacity of 2,522,000 bushels; a cotton warehouse, the largest in the world, with a capacity of 461,855 high density blades; two special banana unloading wharves, equipped with twelve banana unloaders, with a total unloading capacity of approximately 26,400 stems per hour; a two story coffee warehouse, with a storage capacity of approximately 385,000 bags of coffee and a wharf for the handling of green coffee. Exclusive of these

land values, the properties are worth almost \$27,240,000.

These facilities are open year round to all users of the Port on equal terms, and are served by the New Orleans Public Belt Railroad, a municipally owned and operated railroad which has interchange connection with all trunk lines railways and coordinates the railway and steamship services with those of the Port facilities.

To provide industrial sites for companies that had been pre-empted from a river location, the Inner Harbor, or Industrial Canal, was completed about twenty some odd years ago. This great undertaking cost about \$19,000,000, and is five and one-half miles long, five hundred feet deep, and connects the Mississippi River with Lake Pontchartrain, which is the largest body of water that is not ice bound in winter, in the United States.

(Continued on page 62)



Carbon Black Plays Lead Role in Current Rubber Crisis

Top of page — Carbon black plants operated in the Texas "panhandle" by United Carbon Company.

Below—Carbon black being bagged for shipment to the rubber industry.



THE present carbon black situation—regarded by leaders in the rubber industry as the most serious material shortage it has experienced since Far Eastern rubber imports stopped in 1942—turns the spotlight on a substance of lowly origin which has come to fill a unique and most important industrial role.

Carbon black consumption in the United States last year—totalling 425,000 tons—exceeded its production by 21 per cent. About 90 per cent of it is used by the tire industry. It was the severe shortage of carbon black that caused the relaxation of the seven-day week in the tire-building industry last month, and it already has operated to further postpone the day when increased numbers of tires can be made for civilian users. To meet the urgent demands of the war tire program, Government directives have cut down the amount of carbon black used in certain

kinds of tires and huge production increases are being ordered. All projects for the expansion of facilities in the carbon black industry have been given AA1 priority rating.

Since March 26, of this year, all manufacture of rubber grades of carbon black are controlled by the Defense Supply Corporation and all production allocated so the supply may be used to best advantage in meeting the national emergency. So urgent is the need for it now, however, that carbon black, which is a form of that bane of harried housewives—common soot—seems almost as precious as diamonds—of which it is, in fact, a first cousin. Diamonds, graphite and soot, different as they are in appearance and properties, are all produced by the condensation of gaseous carbon.

The raw rubber shortage was licked by the development of an adequate supply of synthetic rubber. But, even in this age of synthetics,

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there is no substitute for carbon black. An accident of nature, since it results from faulty combustion of natural gas, carbon black nevertheless has qualities that man's science and ingenuity have never duplicated. It is the blackest substance known to man, and the most finely divided.

A speck of carbon black the size of the head of a pin may contain a thousand billion basic particles. If the surfaces of the individual particles in one pound of carbon black could be flattened out and laid side by side and end to end, they would cover a surface area of about ten acres.

It is used in the manufacture of printing ink, paints, pigments and stove polish. At present, however, about 90 per cent of the total consumption goes to the rubber industry. The expected postwar development of the plastics industry will be reflected in substantial demands for carbon black from that source, it is believed.

In the early years of motoring, a driver was lucky if a tire lasted for two or three thousand miles. In recent years a tire mileage of 30,000 has been commonplace. One of the most important factors in this development was the discovery that carbon black, compounded with rubber, increases its tensile strength and its resistance to abrasion and tear. It was in 1912 that the first order for a full carload of carbon black in rubber industry history was placed by the B. F. Goodrich company, and during the first World War "black tread" tires began to replace the then-standard white ones.

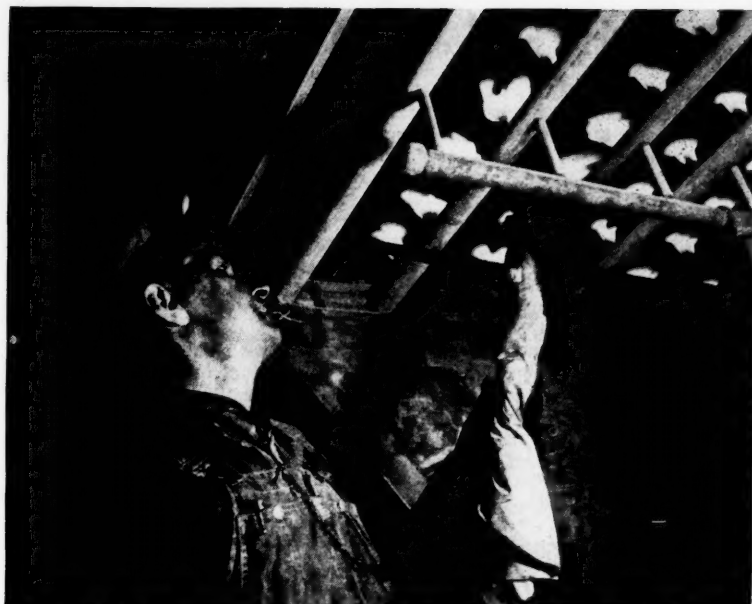
Introduction of carbon black into tire-making was met with skepticism by some elements in the rubber industry, and its sponsors were publicly accused of using it as a cheap substitute for zinc oxide—still one of the primary ingredients in rubber compounding. But road tests quickly demonstrated the superiority of the black tread tires, and for years carbon black has been used universally throughout the industry. It is one of the principal reasons for the great increases in tire mileage the American motorist has enjoyed. Of all substances used in compounding and treating rubber, it is exceeded in importance only by

sulphur, the vulcanizing or curing agent.

Unlike the natural rubber crisis, the shortage of carbon black is due to increased demand rather than cut-off supply. Not only has tire production increased to meet the needs of war, but also the proportion of carbon black to rubber in tire tread formulas has gone up steadily through the years.

Modern treads contain a half pound or more of carbon black to each pound of rubber. Natural rubber tires of the immediate pre-war

(Continued on page 64)



Above—Workman lighting gas burners, which being purposely faulty as to combustion, leave deposits of carbon black in channels above the flames. The carbon black is removed by an automatic scraping process.

Below — "Spaghetti" channel carbon black. This is a dustless variety produced by a special wetting-down and forming process. More widely used is the dustless "pelletized" form consisting of tiny granules.



South's Construction Steady in April

WITH Southern construction during April at a \$104,050,000 total, the aggregate for April 1944 was surpassed by forty-six per cent.

Four-month statistics show a total of \$414,739,000 as the valuation of construction contracts below the Mason and Dixon line, as compared with the \$269,368,000 of the same period of last year. The fifty per cent advance over activity in the first four months of 1944 was due to increases in road, public building and industrial contracts, the latter being the most important factor.

The current April total was bolstered by substantial increases in private building and road construction, with rises in public building and engineering construction helping to offset a drop in industrial projects.

Industrial contracts, however, com-

prised thirty-seven per cent of the April figure, public building representing twenty-eight per cent; engineering construction, fifteen per cent; highways, fourteen per cent, and private building, six per cent.

Several large Texas enterprises accounted for a large portion of the \$19,195,000 of that state, which contributed almost fifty per cent of the \$38,815,000 total for industrial projects in the South during April. Mississippi, Oklahoma, Alabama and Tennessee accounted for over twelve million dollars of the balance.

Public building, the second largest component of the April total, amounted to \$28,363,000. Passing the preceding month's public building total by over six per cent, the figure was the highest since last October and second highest since December, 1943.

by

Samuel A. Lauver

Engineering construction reached its peak of the year so far. The \$15,847,000 total is the highest since last September. Earthwork and airports continued as an important factor in the heavy construction field with a total of \$11,827,000. Sewers and waterworks contributed \$3,624,000 to the April figure.

Southern highway and bridge construction took a definite turn for the better. The \$14,874,000 total recorded for April not only was more than twice the figure for the preceding month and the highest point for 1945 but was the strongest highway contract total since August, 1943.

The private building figure for April was \$6,151,000. Seventy per cent of the total was represented by the \$4,332,000 awards for residential building. The total was the second highest this year, being topped by private building activity in February.

Industrial projects, both proposed and in the incipient construction stages, represented a wide variety of undertakings. These included:

American Light & Traction Co., Chicago, Ill., 1,261-mile natural gas pipeline from Oklahoma to point near Detroit, reported cost \$70,000,000.

Panhandle Eastern Pipe Line Co., facilities, cost of \$3,325,000, for increased deliveries in Appalachian industrial region.

A \$6,600,000 toluene plant, Borger, Texas, by Defense Plant Corp. to be operated by Phillips Petroleum Co.

Carboly Co., Inc., \$6,000,000 factory at Natrium, W. Va., manufacture tungsten carbide shell cores.

Additional facilities costing \$3,000,000 at Guymon, Okla., to be operated by Cabot Carbon Co.

Nashville, Chattanooga and St. Louis Railway, \$2,614,000 grade and curve reduction program between Bruce and Nashville, Tenn.

Mohawk Rubber Co., Akron, Ohio, tire facilities, Chattanooga, Tenn., cost \$2,250,000.

A \$1,200,000 fibre container plant, Pine Bluff, Ark.

Standard Brands, Inc., Dallas, Texas, factory, cost \$1,099,000.

Cabot Carbon Co., \$1,048,000 carbon black plant, at Rodessa, La.

Atlanta and St. Andrews Bay Railroad, modernization of 80 miles of line between Dethan, Ala., and Panama City, Fla., cost \$800,000.

Ethyl Corp., New York, \$750,000 unit, Baton Rouge, La., to produce ethyl chlor-

(Continued on page 60)

South's Construction By Types

	April, 1945 Contracts Awarded	Contracts to be Awarded	Contracts Awarded First Four Months 1945	Contracts Awarded First Four Months 1944
PRIVATE BUILDING				
Assembly (Churches, Theatres, Auditoriums, Fraternal)	\$1,153,000	\$1,349,000	\$2,967,000	\$1,148,000
Commercial (Stores, Restaurants, Filling Stations, Garages)	507,000	2,065,000	2,445,000	544,000
Residential (Apartments, Hotels, Dwellings)	4,332,000	9,474,000	14,146,000	20,363,000
Office	159,000	130,000	596,000	44,000
	\$6,151,000	\$16,018,000	\$20,154,000	\$22,599,000
INDUSTRIAL	\$38,815,000	\$78,850,000	\$315,705,000	\$60,839,000
PUBLIC BUILDING				
City, County, State, Federal	\$34,549,000	\$68,532,000	\$78,397,000	\$52,812,000
Housing	1,341,000	7,291,000	11,768,000	23,630,000
Schools	2,473,000	25,597,000	6,632,000	\$3,116,000
	\$28,363,000	\$101,420,000	\$96,797,000	\$79,558,000
ENGINEERING				
Dams, Drainage, Earthwork and Airports	\$11,827,000	\$31,012,000	\$39,278,000	\$75,974,000
Federal, County, Municipal Electric	396,000	686,000	2,350,000	241,000
Sewers and Waterworks	3,624,000	7,537,000	11,901,000	7,693,000
	\$15,847,000	\$39,235,000	\$53,529,000	\$83,908,000
ROADS, STREETS AND BRIDGES	\$14,874,000	\$23,132,000	\$28,554,000	\$22,464,000
TOTAL	\$104,050,000	\$258,655,000	\$414,739,000	\$269,368,000

South's Construction By States

	April, 1945 Contracts Awarded	Contracts to be Awarded	Contracts Awarded First Four Months 1945	Contracts Awarded First Four Months 1944
Alabama	\$5,353,000	\$5,012,000	\$83,425,000	\$19,716,000
Arkansas	1,713,000	1,915,000	2,688,000	1,094,000
Dist. of Col.	1,154,000	3,377,000	13,310,000	10,316,000
Florida	5,205,000	16,469,000	23,648,000	36,376,000
Georgia	8,635,000	10,144,000	14,969,000	13,339,000
Kentucky	3,014,000	4,818,000	6,986,000	5,226,000
Louisiana	2,543,000	13,334,000	24,142,000	19,421,000
Maryland	13,306,000	21,525,000	23,579,000	19,769,000
Mississippi	4,678,000	4,059,000	16,008,000	4,040,000
Missouri	1,548,000	29,818,000	5,886,000	10,713,000
N. Carolina	1,969,000	11,657,000	8,301,000	8,075,000
Oklahoma	5,164,000	27,181,000	7,174,000	12,249,000
S. Carolina	749,000	2,006,000	4,633,000	8,534,000
Tennessee	3,405,000	5,675,000	20,587,000	9,523,000
Texas	35,843,000	54,730,000	158,012,000	48,116,000
Virginia	7,565,000	36,760,000	19,446,000	35,818,000
W. Virginia	1,806,000	10,135,000	1,385,000	9,243,000
TOTAL	\$104,050,000	\$258,655,000	\$414,739,000	\$269,368,000

EARL A. RHODAS
TOCCOA, GA.

Editor, Manufacturers Record
Baltimore, Maryland

Dear Sir:

I am forcibly struck with your attitude as expressed on the cover of April "Record":

"Japan will make peace overtures. Business experience has taught us that we cannot negotiate with liars, sneaks, and thieves. Such human vermin must be reduced to impotence or exterminated."

Thousands of Americans, and, I am told, millions of soldiers agree with you, realizing that unless Germany and Japan are destroyed, our children of today will be the involuntary victims of another war in another twenty years.

Now the question is, how can we get together in such a way as to make our voices heard at the peace table so that this time there will be a just, righteous, and practical peace, unsullied by commercial expediences, diplomatic chicanery, and impractical brotherly-love programs. This time we want a peace that extinguishes national Germany and national Japan now and forever. After all guilty Nazi and Japanese nationals are slain or executed, the small residue of decent-minded Germans and Japanese should be given a chance to pledge their allegiance to some civilized nation, but not to a "New Germany" or a "New Japan." Policing and disarming programs are impractical. It would take two decent people to police every German or Jap left alive, and the objective is not worth the cost. In fact, the whole kit and boodle of Nazi German and Japanese scum are not worth the life of one decent American boy. So-called "impotency" measures are not going to spell peace with German and Japanese mentalities. Both of these nations have demonstrated to the world their intolerable aims and their bestial characteristics. Therefore, any peace arrangements short of their complete extinction will be an ungrateful mockery to those men and boys of ours who have defended us, who have lost life and limb in doing so, and who have suffered the tortures, the indignities, the outrages, and the brutal atrocities of the two most inhuman tribes of mental monstrosities that the world has ever seen.

We must now unite to apply pressure where it will let the diplomats know that the citizens of the U.S.A. will not approve a soft, inadequate, and bungled job such as their predecessors turned out after 1918. After hearing the opinions of many soldiers, people on the street, in factories and offices, on trains and in hotels, in fact wherever people meet who have suffered from, and known of the German and Japanese atrocities, I am convinced that nothing short of a complete extinction program for national Germany and national Japan will satisfy the desire of American citizens for the protection of our Country and civilization. The time to demand it is now. What can we do to get the ball rolling? Somebody has to start it. Please write me and give me your idea on what we can do as citizens to form a united front in presenting our case to the proper agencies for their action in formulating the peace.

Urgently yours,

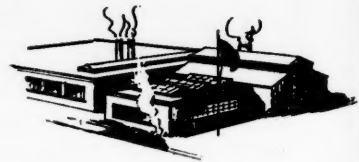
Earl A. Rhoads.

Earl A. Rhoads

EAR:fm

P.S. Tallyrand said, "There is more wisdom in public opinion than is to be found in Napoleon, Voltaire, and all the ministers of state, present or to come."

Southern Industrial Expansion in April



ALABAMA

Expansion—Rural Electrification Administration, St. Louis, Mo., national headquarters, contemplates post war 100 per cent more distribution lines in Alabama or an additional 12,000 miles.

BIRMINGHAM—Shop — Sullivan, Long & Hagerty, Bessemer, erecting 1-story shop.

BIRMINGHAM—Mill — Chrysler Corporation of Delaware, Nelson Chiang, acquired Southern Cotton Company of Alabama, Birmingham; will be operated by present lessee Golding Brothers of New York.

BIRMINGHAM—Interior section of main grandstand of Fair Park will be converted into plant for manufacture of 4.2-in. chemical mortar shells; Dixie Metal Products, Inc., operator.

DOTHAN — Warehouse — Plans made for construction of warehouse for Atlantic & St. Andrews Railway Co.

GADSDEN—Building — Contract let for building for Erwin Electric Co.

ARKANSAS

NORTH LITTLE ROCK—Addition — Contract let to enlarge Cameron Feed Mill.

FLORIDA

Road — Florida East Coast Railway will start work about May 23 on 30-mile Lake Okechobee-Fort Pierce cut off.

BELLE GLADE—Development—War Plants Corp., approved a \$321,000 loan for development of fiber industry by Florida Ramie Products Corp.; estimated cost \$250,000.

JACKSONVILLE—Reconstruction — Contract let for reconstruction of railroad for A. C. L. Railway Co., including rebuilding of road bed and relay track.

MIAMI—Equipment — Defense Plant Corporation increased contract with Tycoon Tackle, Inc., Miami, providing additional equipment at plant in Miami.

MIAMI—Addition — Contract let for construction of building addition, for Florida East Coast Railway.

PENSACOLA—Plant—Ferriss-Lee Lumber Manufacturing Co., Inc., acquired lumber and cabinet works at 220 East Main St.; plan wood products manufacturing plant, post war.

TAMPA — Plant—Peter Paul, Inc., New Haven, Conn., acquired building, E. Broadway and 40th St., for manufacturing plant; install modern equipment.

TAMPA—Stock Farm — Southern Dairies, Inc., a subsidiary of National Dairy Products Corp., acquired milk and ice cream business of Tampa Stock Farms Dairy, including plant.

WINTER HAVEN—Plant—N. L. Hales and associates forming Stores and Locker System, Inc., with capital of \$150,000 to establish a meat packing plant and cold storage locker system.

GEORGIA

ATLANTA—Addition — Low bid received for construction of addition to dairy plant for Southern Dairies, Inc.

ATLANTA—Packing Plant — Contract let for constructing packing house for Armour & Co.

NASHVILLE—Plant — Berrian Investment Co. to soon construct pickle plant; Manhattan Pickle Co., Chicago, to probably operate.

KENTUCKY

BATH COUNTY—Extension — State Public Service Commission, Frankfort, authorized Kentucky Utilities Co., Lexington, to extend Bath County Lines.

BOWLING GREEN—Rural Lines—Warren Rural Electric Corp. authorized to construct 125 miles of lines in Butler, Edmonson, Grayson, Logan, Ohio, Simpson and Warren counties.

LOUISVILLE—Additional Equipment—De-

fense Plant Corporation, increased contract with American Radiator and Standard Sanitary Corp., Pittsburgh, Pa., providing additional equipment at a plant at Louisville, Ky.

SCOTTSVILLE—Line—Rural Electric Authority Co-Operative has approval of War Production Board for 31 miles of 66,000 volt transmission line from Summer Shade, Barren County to Scottsville.

LOUISIANA

BATON ROUGE — Expansion — Dutton-Brown Motor Co. plans improvements.

BATON ROUGE — Ethyl Chloride—Ethyl Corporation, New York, constructing a \$750,000 unit at its Baton Rouge plant, a new process for making ethyl chloride.

CROWLEY—Plant—Supreme Rice Mill let contract for two Berico units.

FRANKLINTON—Plant — Green Brothers of Enon and Burris Brothers, Ltd., of Franklinton, will erect sweet potato dehydration plant.

LAKE CHARLES—Plant Facilities—Mathieson Alkali Works, New York City, granted \$80,000 from Defense Plant Corp. for additional plant facilities.

MONROE—Wiring—City let contract for power wiring for light plant.

NEW ORLEANS—Plant Building — Bids opened for construction of new plant building for Southern Tool & Engineering Co.

NEW ORLEANS—Pipe Line—Tide Water Associated Oil Co., Houston, applied to War Department for authority to install two pipe lines for gas and water in Plaquemines Parish.

NEW ORLEANS—Warehouse — Southern Tractor & Equipment Co., 501 Elysian Fields Ave., plans erection of warehouse, on Jefferson Highway.

NEW ORLEANS—Duct Work—Contract let for duct work in connection with air conditioning final lines at Consolidated Vultee Aircraft Corporation.

NEW ORLEANS—Repairs—Chase Bag Co., 4500 N. Dorgenois St., let contract for partition work and general repairs to plant.

RODESSA—Plant — Cabot Carbon Co. to operate \$1,048,000 carbon black plant; Defense Plant Corp., Washington, D. C., owners.

SHREVEPORT — Pipe Line — Interstate Pipe Line Co. has acquired 75 per cent of right of way for construction of 140-mile pipeline.

TANGIPAHOA — Dairy Plant Additions — Contract let for additions to dairy plants at Tangipahoa and Magnolia, Miss., for Cloverland Dairy Products Co.

MARYLAND

BALTIMORE COUNTY—Warehouse—Samuel M. Pistorio, Carroll Station, will construct storage warehouse, New Wilkens Ave.

BALTIMORE—Office, etc.—Contract let for office and gear storage building, Locust Point, for B. & O. R. R.

BALTIMORE—Addition — Contract let for addition to plant, 1001-1101 Edison Highway, for Rustless Iron & Steel Co.

BALTIMORE—Bulkhead—Contract let for reconstruction of bulk head for Canton R. R. Co., H. T. Brooks.

BALTIMORE—Building—William E. Hooper & Sons Co., erecting cotton duck storage building, 3500 Parkdale Ave.

BALTIMORE—Equipment — Defense Plant Corp. executed contract with Davison Chemical Corp. for equipment at plant at cost of \$140,000.

BALTIMORE—Platform, Etc.—Contract let for loading platform, new front wall, etc., for American Ice Co.

CUMBERLAND—Addition — Potomac Edison Company erecting \$10,000 addition to bus garage on North Centre street.

DUNDALK—Alterations—Contract let for alterations to building for Central Foundry Co.; install heating system, etc.

ELKTON — Plant — Triumph Explosives,

Inc., received low bid for palletizing project.

HAGERSTOWN—Hangar — Fairchild Aircraft Division of Fairchild Engine and Airplane Corp. constructing a new 60,000 square-foot hangar.

MISSISSIPPI

JACKSON—Plant—Merchants Co. will rebuild burned Valley Mill warehouse.

LAUREL—Office—Contract let for converting building Fifth Ave. into office for Gulf Refining Co.

NATCHEZ—Buildings—Contract let for 3 new buildings for Armstrong Tire & Rubber Co.

MISSOURI

KANSAS CITY—Expansion—Carl Bernitz, operator of Bernitz Manufacturing & Machine Works, acquired building at 3801 E. Eighteenth St. for expansion; post war.

PRESTON—Equipment — Defense Plant Corp. executed contract with Preston Trucking Co., Inc., providing truck transportation equipment.

ST. LOUIS—Plant — Cupples Co. acquired site, Vandeventer and McBee Avenues, 8 acres; will erect new structure.

ST. LOUIS—Alterations — Shampaine Co. has permit for office and factory alteration.

ST. LOUIS—Building—L. O. Stocker Co., Arcade Bldg., will erect building for B-I Beverage Co.

ST. LOUIS—Terminal — Schaum Transfer Co. has site for truck terminal; post war.

ST. LOUIS—Factory — Braznell Co. plans factory, S. W. corner of Market and Jamestown Sts.

ST. LOUIS—Building—William R. Warner & Co., New York, contemplates building.

ST. LOUIS—Building—J. B. Carr Biscuit Co., care of J. Forder Buckley, applied for permit for bakery and office, 4400 S. Kingshighway.

ST. LOUIS—Building — One-story factory under construction at 1600 S. Hanley Rd. for Nartkin & Co.

ST. LOUIS—Shop—Wabash R. R. Co. to erect one-story asbestos shingle shop.

ST. LOUIS—Expansion—Hussman-Ligonier Co. plans expansion.

SIKESTON—Warehouses—Contract let for construction of 2 warehouses, Harvey Parks Airport, for Reconstruction Finance Corp.

NORTH CAROLINA

BILTMORE—Alterations—Contract let for passenger station remodeling for Southern Railway Co.

BURLINGTON—Shop — Contract let for electric repair shop for J. O. Bayliff.

CHARLOTTE—Building—Blue Plate Foods Corp., New Orleans, plans building for manufacture salad dressing.

CHARLOTTE—Expansion—Atkinson-Nest fleet, Inc., plans additional plant facilities; post-war.

CHARLOTTE—Warehouse — Contract let for storage warehouse and railroad siding for Reconstruction Finance Corporation.

GREENSBORO—Plant — O'Shea Manufacturing Co., Chicago, Ill., leased building, 223 East Sycamore St.

HIGH POINT—Plant—Plans completed for \$125,000 ice cream manufacturing plant for S. D. Gibson, Jr.

LINCOLNTON—Building — Frozen Foods Inc., received bids for frozen foods plant.

MARSHALL—Switchboard — French Broad Electric Membership Corp. received bids for installation of manual switchboard in power house.

WINSTON-SALEM—Plant — A. G. Shore interested in erection of cold storage and refrigeration plant, capacity 150 carloads.

OKLAHOMA

Pipe Line—American Light & Traction Co., Chicago, filed application with Federal Power Commission to build and operate a 1,216-mile

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FORT WORTH
for warehouse,
Poultry & Egg

natural gas pipe line from Oklahoma to near Detroit, work to begin about March 1, 1946.

SOUTH CAROLINA

CHARLESTON—Additions, Etc.—Low bids announced for alterations and additions for Eastern Air Lines, Charleston.

CONWAY—Radio Station—Lloyd Hawley of Florence, S. C., has permit for radio station.

DILLON—Building—D. M. Dew and Sons of Latta, erect building to house D. E. Rippe-toe & Co., tent manufacturers.

FLORENCE—Site Preparation—Contract has been let for site preparation and railroad track for American Lumber & Treating Co., Chicago, Ill.

GREENWOOD—Platform—Contract let for rebuilding platform for Seaboard Airline Railroad, Norfolk, Va.

GREENWOOD—Addition—Contract let for warehouse addition to bakery for J. B. Carr Biscuit Co.

ROCK HILL—Freezer Plant—Rock Hill Cold Storage, Inc., plans freezer plant.

SPARTANBURG—Newspaper—Smith Davis and William Townes, acquired Herald-Journal and will operate.

WINNSBORO—Abattoir—Contract let for abattoir and freezer locker plant for Palmetto Frozen Foods Co., W. K. Martin, owner.

TENNESSEE

CHATTANOOGA—Plant—Contract let for rubber tire facilities for Mohawk Rubber Co.

CHATTANOOGA—Expansion—Air Products, Inc., Manufacturers Rd., considering a \$500,000 expansion program; 2 new buildings.

KNOXVILLE—The Tennessee Foundry and Machine Co., 806 Sixteenth Avenue, North, incorporated by Maclin P. Davis, machinery.

MEMPHIS—Pipe Lines—Memphis Natural Gas Co. will construct two pipeline extensions between Memphis and Monroe, La., gas fields.

MEMPHIS—Building—John P. Robillio & Co. plans building.

NASHVILLE—Improvements—Nashville, Chattanooga and St. Louis Railway starting work on grade and curve reductions between Bruceton and Nashville.

NASHVILLE—Transportation—Defense Plant Corp. executed contract with Hoover Motor Express, Inc., providing truck transportation equipment.

TEXAS

ALAMO—Packing Plant—John T. Burkhardt, c/o Burkhardt Fruit & Vegetable Co., plans packing plant.

BAY CITY—Plant—Contract let for rice-drying plant, 30,000 bbl. capacity, for Bay City Rice-Drying Plant.

BAYTOWN—Building—Contract let for construction of laboratory building; Humble Oil & Refining Co.

BEAUMONT—Plant Addition—Pittsburgh Plate Glass Co. plans addition to plant.

BEAUMONT—Expansion—United States Steel Products Co. plans enlargement of plant; post war.

BEAUMONT—Cables—Federal Communications Commission granted permission to Southwestern Bell Telephone Co. to lay underground telephone cables between Houston and Beaumont.

BORGER—Toluene Plant—Defense Plant Corp. authorized construction of a toluene manufacturing plant; to be operated by Phillips Petroleum Co.

DALLAS—Addition—Contract let for construction of steel frame addition to present plant, Diamond Alkali Co. of Texas.

DENISON—Shops—Missouri-Kansas-Texas Lines, St. Louis, Mo., plans general rehabilitation of railroad car shops at Denison.

DENTON—Airport—Contract let for airport construction for Civil Aeronautics Administration, Fort Worth.

EDINBURG—Packing Plant—Harvey Jackson plans packing plant.

EDINBURG—Plant—Contract let for creamery plant, for Golden Jersey Creamery.

EDINBURG—Remodeling—Soil Correction Plant, care of Jake Atwood, Fort Worth, remodeling 2-story building.

FORT WORTH—Warehouse—Contract let for warehouse, 801 E. 9th St., for Fort Worth Poultry & Egg Co.

FORT WORTH—Warehouse—Work started on warehouse, Lancaster and Jones Sts., for Carpenter Paper Co.

FORT WORTH—Packing Plant—Contract let for 2-story packing plant addition for Swift & Co.

FORT WORTH—Plant—Trailmobile Co. erecting plant.

FREEPORT—Plant—Capt. Carl Muchowich will erect \$150,000 quick freeze plant on Brazosport harbor channel.

GARLAND—Factory—Luscombe Airplane Corp., Trenton, N. J., plans construction of airplane factory.

HILLSBORO—Plant—M. C. Coleman of Coleman, started work on 600 locker frosted food plant on N. Covington St.

HOUSTON—Addition—Contract let, work started, on plant addition, for Pecan Shellers Co-Operative.

HOUSTON—Addition—Contract let for addition to plant 1805 Franklin St. for P. R. and O. D. Daniels.

HOUSTON—Warehouse—Contract let, work started on warehouse; Southern Supply Corp.

HOUSTON—Warehouse—Republic Supply Co. applied for permit to erect \$50,000 warehouse at 501 N. Greenwood St.

HOUSTON—Warehouse—Lockwood Warehouse Realty Co. has permit for \$100,000 warehouse, 600 Lockwood.

HOUSTON—Shop—Perforating Gun, Inc., 417 Samson St., erect office and shop at 3806 Tharpe St.

HOUSTON—Addition—Low bids received for constructing addition to Brass & Machine Co. plant.

HOUSTON—Factory Building—Viking Supply Co., Dallas, plans warehouse and factory building, Texas Avenue and Dowling Streets.

HOUSTON—Factory—A. C. Horn Co. plans erection of \$250,000 plant, varnish and lacquer plant on Buffalo Bayou.

HOUSTON—Expansion—C. Selzer & Sons acquired site for plant expansion.

HOUSTON—Power Line—Houston Lighting & Power Co. applied for permission to construct power line across Buffalo Bayou.

HOUSTON—Warehouse—Rosmick Manufacturing Co. will construct one-story warehouse.

HOUSTON—Plant Conversion—Contract let for remodeling second floor shell loading plant; Gulf Electric Co.

HOUSTON—Bakery Addition—Contract let for construction of addition to bakery; P. D. Denny, owner.

HOUSTON—Flooring, Etc.—Contract let for flooring, slab, and piping for building;

Rheem Manufacturing Co.

HOUSTON—Landing System—Low bid received for construction of instrument landing system at Ellington Field for Civil Aeronautics Administration, Fort Worth.

KATY—Building—Contract let and work under way on construction of metering and filtering building and facilities at Katy for Dow Chemical Co., Freeport.

LAREDO—Addition—Contract let for construction of addition to present telephone building of Southwestern Bell Telephone Co.

McALLEN—Plant—Contract let, work started on ethyl gasoline plant near McAllen; Rado Refining Co.

MONTE ALTO—Plant—Mid-Valley Cooperative Canning Co., Rio Farms, Inc., has priorities for erection of building; also plans processing plant.

ODESSA—Building—Contract let for construction of building for Tri-State Equipment Co.

ODESSA—Carbon Black Plant—United Carbon Co., Charleston, W. Va., has under construction at Odessa, a channel-type carbon black plant.

PALACIOS—Plant—City, J. L. Duetsch, Mayor, has plans in progress for quick freeze plant.

PASADENA—Plant—Tally W. Nichols, owner of Arrow Engineering Co., Houston, acquired building at 337 South Winona St., and 20 vacant lots, for new plant.

RAYMONDVILLE—Plant—Willacy County Chronicle, erecting newspaper plant.

RAYMONDVILLE—Remodeling—E. I. Garrett remodeling packing plant.

RAYMONDVILLE—Addition—Central Power & Light Co., to erect addition to ice plant.

SAN ANTONIO—Remodeling—San Antonio Implement Co., remodeling, also general repairs to machine shop.

SAN MARCOS—Addition—Contract let for erection of 1-story addition to bakery for Simon Bakery.

SMITHVILLE—Plant—Contract let for construction of frozen food locker plant; W. G. Anthony, Smithville, owner and operator.

TEXAS CITY—Alterations—Contract let for alterations and additions to telephone building; Southwestern Bell Telephone Co.

WESLACO—Packing Plant—American Growers, Inc., has plans in progress for construction of 1 and 2-story packing plant.

WESLACO—Warehouse—Mid-Valley Bonded Warehouse, care of Central Power & Light Co.

(Continued on page 60)

Continuous streams of 155 mm. shells roll along on conveyors of the Reed Roller Bit plant at Houston, Texas, where a contract for General Sherman transmissions and drives has just been finished. The shells shown below are machined to close tolerances in size, weight and balance.



Industrial News

Link-Belt Dollar Sales Hit New High in 1944

The annual report of Link-Belt Company, through its president, W. C. Carter, indicates a new dollar sales record for 1944.

Billed sales for 1944 totaled \$74,000,000 compared with \$73,000,000 for 1943 and \$62,000,000 for 1942.

The report shows that, of every sales dollar, 34 cents went into wages and salaries; 20% cents were paid in taxes; other operating costs took 41½ cents; and two and one-tenth cents were paid in dividends, leaving two and two-tenths cents to be plowed back into business. Net profit per share of common stock, for 1944, including postwar refund is placed at \$4.31.

Expressing satisfaction with past achievements and optimism for the future of the firm's eleven plants, President Carter gives much credit for accomplishments recorded to the employees of the company to whom he has issued, as a supplement to the annual report, an interesting pamphlet entitled "A Short Course in Accounting."

The pamphlet illustrates graphically the parts played by manufacturing cost, including material, labor and overhead, together with selling cost and selling price in profitable industrial operation.

Backlog of the company, exclusive of ordnance subsidiary, compared by quarters since, 1943, is shown to have varied from \$40,000,000 to \$51,000,000, with a current figure of about \$44,000,000.

First and Merchants Bank Marks 80th Anniversary

One of the South's oldest and largest banking institutions, the First and Merchants National of Richmond, has just celebrated its eightieth anniversary. This bank was organized just three weeks after the fall of Richmond, April 24, 1865, in the war between the states. President H. H. Harris has issued the following statement:

"In the 80 years of its existence First and Merchants National Bank has grown to be the largest in Virginia and one of the 100 largest banks in the nation, with resources of more than \$176,000,000. This achievement was made possible through the loyal patronage of thousands of individuals, firms, corporations and other organizations large and small, which used the extensive facilities of the bank on which have been kind enough to recommend this bank to others."

The present name of the bank resulted from the consolidation in 1926 of the First National and the Merchants National banks.

United Autographic Appoints New Representatives

The United Autographic Register Company, 5000 S. California Avenue, Chicago, Illinois, manufacturers of autographic registers and continuous forms, have announced recent appointments in southern cities.

In Birmingham, Alabama, James A. Head & Company have been appointed as representatives for both the autographic register and the continuous forms lines. This organization is well known throughout the state of Alabama and the wide coverage of important cities throughout the state will make it possible for many firms to get first hand information regarding Uarco Systems.

In Dallas, Texas, the Dallas Paper Company has become the representative for the continuous forms line exclusively. George Vanagas who has wide experience in preparation of business forms will specialize in this line.

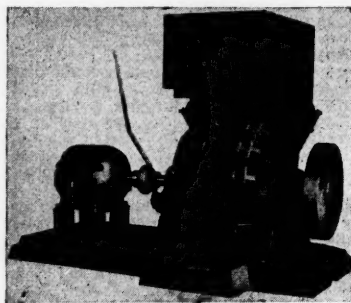
In Texarkana, Texas, E. V. McWilliams of the McWilliams Stationery Company is acting as Uarco's representative for both the autographic register line and the continuous forms line, too. Mr. McWilliams will cover 9 counties in Texas and Arkansas surrounding Texarkana.

Another important appointment is the Walker, Evans & Cogswell Company located in Charleston South Carolina. This firm is long-established—they were official printers for the Confederacy during the Civil War and are well-known throughout the South. They, too, will handle both the autographic register line and the continuous forms line for the Uarco organization.

American Turnings Crusher Aids Wartime Salvage

The American Ring Metal Turnings Crusher is proving highly valuable in the wartime salvaging of scrap metals in the form of machine shop by-products, such as turnings, borings, cuttings, chips and shavings.

This machine reduces these metal products to a common chip form to promote easier handling and storing, and to make them usable by blast furnaces as well as more acceptable by open hearth furnaces. Crushed turnings are more economical to haul since the maximum carload is 100,000, whereas the turnings in mill form weigh only about 30,000 pounds per carload. Since it is important to recover as much as possible of the cutting oil adhering to these metal turnings, it has been discovered that the crushed trim-



This crushing machine aids in the disposal of machine-tool chaff, called "swarf" by the British.

ings yield more of the oil than do the irregularly shaped and crushed forms. For these reasons the American Pulverizer Company, manufacturers, state many of their ring metal crushers have paid for themselves in a short time, and old users are making additional installations.

The unique feature of this crusher is its series of steel cutter-rings floating at the ends of a series of rotor arms. Centrifugal force maintains these rings at their outermost-cutting position but permit instant deflection upon contact with a solid metal. The manufacturers are located at 1149 Macklind Avenue, St. Louis 10, Mo.

Florida Distributor Named

Mack Sales, 425 East Platt St., Tampa, has been appointed distributor for the State of Florida by The Briggs Clarifier Company, Washington, D. C., manufacturers of industrial, marine and automotive oil filtration equipment. F. F. Mack, who head the firm, has ably contributed to the war effort during the past few years by concentrating his talents on the production of vitally necessary torpedoes.

U. S. Rubber to Install New Textile Units

Eighty new units of machinery to meet increased war demands are to be installed by four textile mills of United States Rubber Company.

Installations will be made at Winnsboro, S. C.; Shelbyville, Tenn.; and the Reid and Stark Mills, Hozansville, Ga.

Three high-speed spooling machines and three warpers are to be added at the Shelbyville, Tennessee mill. Twenty long draft spinning frames are also to be set up there.

At the Hozansville, Georgia, plants, 50 new spinning frames are scheduled to be installed. Modern machinery will be used in the cotton bale opening room, resulting in cleaner finished products.

New vacuum stripping units will be employed at the four mills on carding machines. These units will eliminate a considerable portion of the dust which results from the processing.

H. Gordon Smith, general manager of the textile division, said these new units will improve both quality of production and working conditions at the plants.

All-Time Business High Scored by B&O in 1944

President Roy B. White reports for 1944 the largest business in the history of Baltimore & Ohio Railroad.

Freight revenues were \$315,418,567, and passenger revenues \$51,305,473, increases respectively of 5.27% and 29.06% of 1943.

Operating expenses also increased substantially, being \$36,454,401, or 14.56%, more in 1944 than in 1943.

Tax accruals at \$48,984,845 were at an all time high and were \$2,227,636 more than in 1943. Of total 1944 taxes, \$10,588,962 were taxes on wages for retirement and unemployment benefits. Net income was \$20,914,438 or \$9,585,042 less than in 1943.

New equipment placed in service consisted of 44 locomotives, 1250 hopper cars, and 64 other units, and delivery is expected during 1945 on 44 new locomotives, 1200 steel box cars and 1000 steel hopper cars.

Mr. White emphasized the improvement made in the financial structure of the company since the 1935 modification plan became effective, with reduction in outstanding debt, other than equipment trusts, of \$105,674,400, and a consequent reduction in annual interest charges of \$5,085,375.

J. L. Young Joins Official Staff of National Tube

John L. Young has been chosen for the newly created post of Vice President in Charge of Engineering of United States Steel's National Tube Company according to an announcement by C. R. Cox, president.

A native of Evansville, Indiana and a graduate of the University of Indiana, Mr. Young began his career with the Timken Roller Bearing Company in Canton, Ohio. There he held various positions in the alloy tube and steel departments, later transferring to the metallurgical department working on metallurgical problems. He joined the United Engineering and Foundry Company in 1936 and developed machinery and equipment for the steel and allied industries.

Mr. Young is a member of the Policy Committee of the United States Chamber of Commerce, Rotary Club of Pittsburgh, American Associations of Metal, Association of Iron and Steel Engineers and many other technical and civic groups.

Export Representative Named

H. Lester Freeman has been appointed Washington representative for the export division of the Oil Well Supply Company, subsidiary of U. S. Steel Corp., according to an announcement by Fred F. Murray, company president, Dallas, Texas.

Besides having held important posts with Petroleum Administration of War, Mr. Freeman has had long experience in the foreign oil industry with a foreign subsidiary of Standard Oil Company. He returned from service in foreign fields in 1941 and assisted in the organization of the Portland Pipe Line Company after which he joined the PAW staff.

Fiberglas Mat Finds New Uses

Fiberglas mats, developed for use in storage batteries, are being now applied to entirely new uses.

In roll form it is employed as protection for underground pipelines against corrosion and electrolytic action. Because of high tensile strength and non-hygroscopic qualities of individual glass fibers, the mats are also being used as base for a new plastic laminated material. For this purpose they are impregnated with a thermo-setting aniline formaldehyde resin and are cured under high pressure.

Still another use is that of base material for gaskets and sheet-packing. In this capacity the mats act as carrying medium for synthetic resins.

Made by Owens-Corning Fiberglas Corporation, Toledo, Ohio, Fiberglas mat is composed of glass fibers with average diameter of .0005 inch, intertwined at random and bonded to form a thin, highly-porous felt-like material. Mats range in thickness from .010 to .050 inch and in width from 22 to 36 inches in roll lengths of 150 to 300 feet.

(Continued on page 58)

OHIO

Ohio always has been a land of builders—people who keep their eyes on the future while enjoying the richness of the present. The spirit of enterprise that exists in Ohio, the friendliness of its people and the vast natural resources of the State invite the investment of new capital.

Frank J. Lausche

Frank J. Lausche
Governor of Ohio



The wealth of "the Ohio country" served as a lodestone even in the days of the prehistoric mound builders. Later it was the scene of many of the engagements of the French and Indian Wars which resulted in the establishment of boundaries in the Northwest Territory. Ohio's Oberlin College was the first in the world to admit women on equal terms with men.

Empire within an Empire

The products of Ohio's developing resources — her factories, her farms, her raw materials — have been important factors in strengthening the national economy, and speeding America's war effort. Manufacturing, mining, and oil are among the chief interests of progressive Ohio. Iron and steel, rubber and machinery industries operate on a large scale. "An Empire Within An Empire," Ohio is a large producer of limestone and clay products, gypsum and salt. Meat packing is extensive. Vast quantities of corn, small grains, soya beans, vegetables, hay, tobacco, fruits, livestock, and livestock products are produced. In normal times, there is ample labor. Ohio's north central location and great store of raw materials and resources make the State attractive to industry.

The Norfolk and Western Railway and its predecessor lines have served the great Buckeye state for 69 years. "Precision Transportation," the Norfolk and Western's fast freight and passenger service between Cincinnati and Columbus and the Virginias and Carolinas connects Ohio with the famous Port of Norfolk, Va.

For information on post-war industrial sites in progressive Ohio, write: Industrial and Agricultural Department, Norfolk and Western Railway, Roanoke 17, Va.



**Norfolk
and Western
RAILWAY**

FOR BETTER PLANT LOCATIONS



Industrial News

Jack & Heintz Outstrip Production Schedule

Jack & Heintz, Inc., Cleveland, announce that assembly-line methods and specially developed tests have enabled the firm to put deliveries of G-1230B Formation Stick 40 per cent ahead of schedule.

The formation stick built by Minneapolis Honeywell Company in cooperation with Air Technical Service Command is installed in pairs on both the B-17 and B-24 airplanes for use by the pilot and co-pilot. As it is an accessory control assembly for the Type C-1 Automatic Pilot it functions in the same system by feeding signals to the autopilot amplifier when the stick is moved. These signals operate the three servo units of the autopilot to maneuver the airplane.

Controlling the flight attitude of the airplane through the autopilot by means of the formation stick requires only a minimum of physical effort on the pilot's part as the autopilot acts as control booster. These units are particularly helpful when operating in tight formations on long bombing missions.

Jack & Heintz, Inc., undertook the manufacture of this vitally needed equipment early in November, 1944 at the request of the Army Air Forces.

250 Box Cars Ordered

An order for 250 fifty-ton, forty-foot, steel box cars has been received by the Mt. Vernon Car Manufacturing Co., Mt. Vernon, Ill., from the Consolidated Railroads of Cuba. The Mt. Vernon firm is a division of H. K. Porter Company, Inc., of Pittsburgh.

U. S. Steel Breaks Another Production Record

With U. S. Steel Corporation the year 1944 was one of production for victory. Facilities of the corporation and its subsidiaries were utilized almost entirely in the Nation's war effort, just as in every year since 1940.

Last year 30.8 million tons of ingots and castings were produced, establishing an all time tonnage record for the fourth consecutive year, while 21.1 million tons of finished steel was shipped, exceeding the 1943 record by a million tons.

Heppenstall Gets New Post

Announcement has been made of the election of S. B. Heppenstall, Jr., to the vice presidency of H. K. Porter Company, Inc., with headquarters in the firm's general offices in Pittsburgh.

Mr. Heppenstall was formerly Vice President in Charge of Sales of the Heppenstall Company. He is a member of the Association of Iron and Steel Engineers and the American Iron and Steel Institute.

Lacey Opens New Agency

A new advertising agency, Holder Morrow Collier Inc., has been opened in Tampa by Jack Lacey, advertising manager of Tampa Electric Co., and creator of the idea of "Leisure House," the utility company's home economics departments.

The company which originated in Miami several years ago, is incorporated in Florida and operates nationally. Arnold J. Meyer, artist and engraver for many years in Tampa, will be art director for the Tampa branch of the agency.

Mr. Lacey four times won national awards in newspaper and radio advertising.

Alcoa Subsidiary Adopts Name of Parent Firm

The Republic Mining and Manufacturing Company has announced change of its name, to Alcoa Mining Company, through its president, Frank B. Cuff.

The Republic name, prominently associated with American bauxite mining operations is being replaced to identify the company more closely with Aluminum Company of America, of which it has been a 100 per cent subsidiary since 1909. Republic, incorporated in 1882, was the first concern to mine bauxite (ore of aluminum) in the United States, and has been largely responsible for the development of the nation's principal deposits, in Arkansas, which it has mined since 1899.

During World War II, the company has

been producing the ore at a rate 15 times that of 1939, in order to help Alcoa meet the vastly increased needs of aluminum for aircraft and other military applications. It also provides bauxite to the chemical, abrasive and refractory industries, and carries on operations in Georgia and Alabama, in addition to Arkansas.

New Masonry Protector Ready

Ten years of research and development of a protective coating for concrete, stucco and brick through the application of inorganic gels have culminated in a product called "Waterfoil," now released for general use, according to an announcement by its makers, The A. C. Horn Company of Long Island City 1, N. Y.

Waterfoil is described as a decorative water resistant that controls moisture and temperature changes for exterior masonry surfaces. Its formula is based on the principle that masonry requires an optimum amount of moisture, neither too little nor too much and is represented to contain no critical material such as linseed or tung oil, varnish, lacquer, resinous emulsion nor volatile thinners.

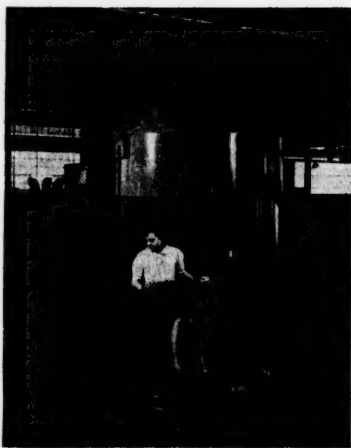
Great Advancement Seen in New Crane Cab Design

Hailed as a great step forward, a new cab design for overhead traveling cranes, developed by the Cleveland Crane & Engineering Co., Wickliffe, Ohio, includes full vision for the operator, comfortable sit-down control and airconditioning.

Called the most radical innovation in its field since the advent of the all-welded steel crane construction, it is cylindrical in shape and streamlined in appearance. Corners or blind vision spots are eliminated.

Transparent enclosure panels, extending to the floor and permitting maximum vision in every direction, are of a new plastic, shatter proof, and impervious to gases that may be injurious to glass.

With this cab, crane operation becomes an



Revolutionary Cleveland Crane cab is 6', 6" by 4', 6" diameter.

easy, sit-down job. Master switches, are conveniently located. Hoist and trolley switches, and the bridge switch afford a definite control job for each of the operator's hands and feet, without double duty as in most conventional cabs.

An air-cooled air-conditioning unit, especially designed for this cab provides fresh clean air at any normal temperature desired and gives protection against objectionable gasses, dusts and fumes.

This new cab is a self contained unit that may be furnished with any new crane employing magnetic control and it may be applied to existing cranes of any make.

George Spatta Named Head of Clark Equipment

George Spatta, formerly executive vice president, has been elevated to the presidency of Clark Equipment Company, Buchanan, Michigan, succeeding the late Albert S. Bonner.

Mr. Spatta came to the Clark organization from General Electric Company in 1927 and developed many of the products manufactured by Clark. He is a member of the S.E.A., D.A.C., Detroit Engineering Society and the Bankers' Club of America.

Other changes in the Clark official staff consist of: Dr. Leo Wolman, professor of economics, Columbia University, elected to the board; Dr. John M. Clark of the du Pont Company, Wilmington, now a director, elected to the executive committee; and John G. Mack elected a vice president and director.

Du Pont Plans Postwar Color Conditioning Program

A postwar program for scientific color conditioning for industrial interiors has been announced by the Finishes Division of E. I. du Pont de Nemours & Co. Inc.

The system was developed by du Pont in collaboration with Faber Birren, leading industrial color authority. Among the benefits of "color conditioning" are increased production, improved quality of workmanship and reduced personal injuries.

The "color conditioning" technique is designed, according to the announcement, to protect employees against eyestrain by reducing glare and eliminating extreme contrasts between light and dark. It recommends restraint in using color, especially distracting, over-stimulating hues, as well as abolishing light-robbing, dark areas.

The announcement emphasized that the program, although designed to introduce more color into the industrial scene, is not mere "interior decoration" of plants, but the outcome of long-term research that already has done much toward "putting color to work" for industrial efficiency. Hundreds of case histories based on color installations in all types of plants were compiled and studied.

Pearson Neaman Steps Up

Freeport Sulphur Company has announced the election of Pearson E. Neaman, New York attorney as vice president of the company and its subsidiaries, including Cuban-American Manganese Corporation and Nicaraguan Nickel Company. Mr. Neaman had been secretary of Freeport Sulphur, in charge of legal activities since 1930 and will continue as head of legal affairs. He is a graduate of Harvard College and its Law School; a member of the Harvard Club of New York City; the Bar Association of New York City and the Cloud Club.

International Air Shipments Up

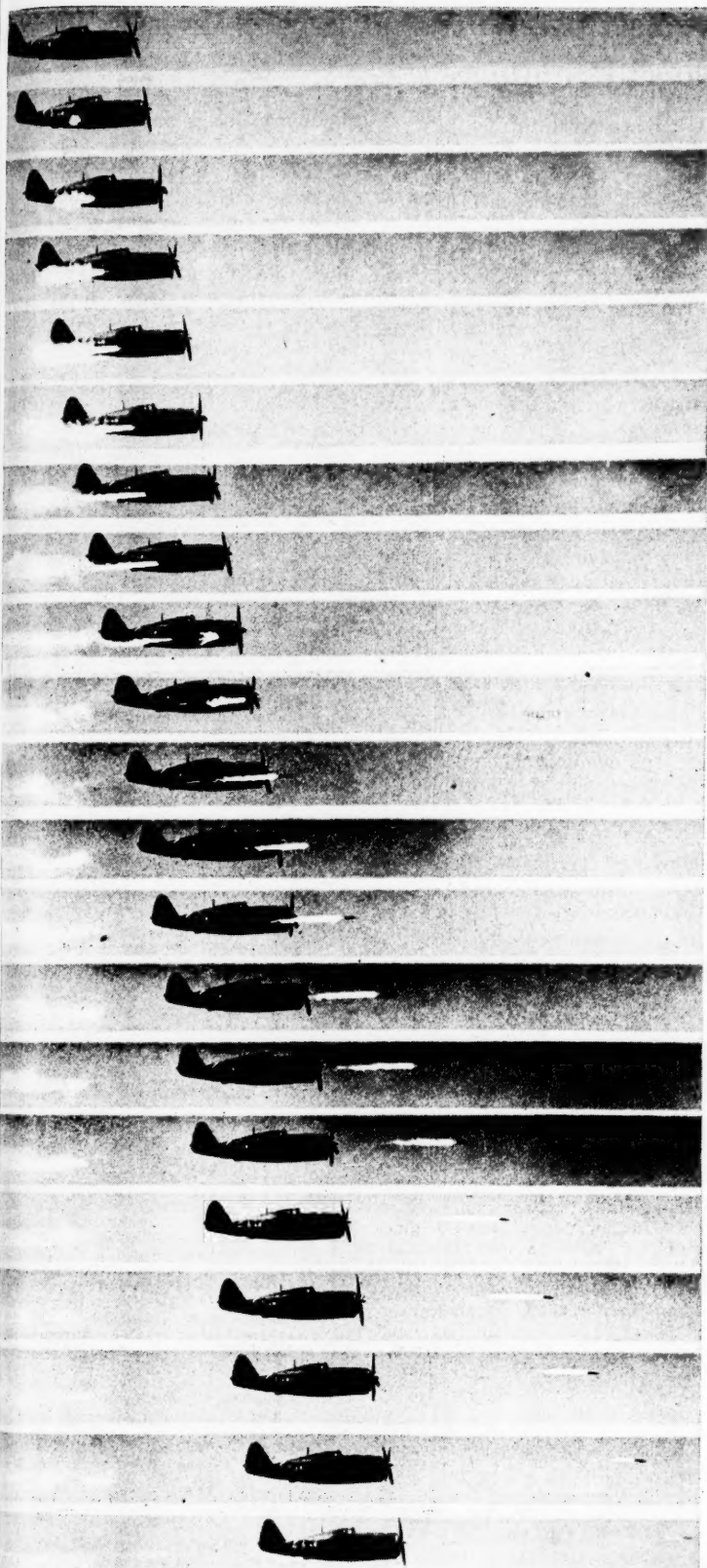
International air express charges paid by shippers during March totaled \$129,069.92 for an increase of 149 per cent over the same month in 1944, reports the Air Express Division of Railway Express Agency. The number of air express shipments handled by the Agency for three international airlines rose 41 per cent in March, with a total of 28,888 as against 19,196 for March, 1944. Heavier individual shipments and longer hauls are indicated by the marked jump in charges and outgoing shipments maintained a ratio of nearly three to one over incoming traffic during the month, the Agency said.

Works Manager Appointed

Appointment of John A. Goundrey as works manager is announced by Diamond Iron Works, Inc., and the Mahr Manufacturing Co. Minneapolis, makers of construction machinery, furnaces and ovens. Mr. Goundrey was previously production manager of Federal Machine and Welder Co., Tank Division Warren, Ohio.

A. A. Hare Made Sales Aide

A. A. Hare has been appointed Assistant District Sales Manager of the Pittsburgh district of Youngstown Sheet and Tube Company. Before appointment to his new post Mr. Hare had charge of territory in upper New Jersey.



Photographing a ROCKET at 800 miles an hour

ONE outstanding weapon of this war is the rocket, now used by our fighting forces on land and sea and in the air.

Scientists at Bell Telephone Laboratories had an important part in the technical development of this American weapon. One of their contributions was the "ribbon frame" camera which takes 120 pictures a second on a continuously moving film. It has proved of great value in studying rockets and shells in flight.

The ribbon frame camera is only one of many Bell Laboratories developments which are being turned against the enemy.

Our Laboratories are now wholly devoted to the war. When it is won, they will go back to their regular job—helping the Bell System give you the best telephone service in the world.



BELL TELEPHONE SYSTEM

Succession pictures taken by a "ribbon frame" camera, showing a wing rocket getting under way and speeding toward the enemy at about 13 miles a minute. This camera was developed by Bell Telephone Laboratories.

Bethlehem Head Reveals Post-War Prospects at "Shipways" Premiere

E. G. GRACE, president of Bethlehem Steel Corporation, gave one of the first authoritative clues to post-war industrial activity, when on May 9 he revealed that his concern expects to employ from 30,000 to 35,000 workers for operations in the Maryland area where three great Bethlehem plants now engaged in war production have required a peak of around 81,000 to 82,000 employees.

The statement was made as a prelude to the public premiere of the motion picture "Shipways," the record of the tremendous part the fifteen Bethlehem plants have played in building and repairing fighting vessels and merchant ships ranging from giant airplane carriers and battleships to the smaller tank and infantry landing craft, with such intermediate types and sizes as Liberty and Victory ships, tankers, ore ships and destroyer escorts.

More than three hundred guests representing the blue blood of Baltimore industrial, financial and shipping circles, as well as local army, navy and Coast Guard officers gathered in the big ballroom of the Hotel Belvedere to witness the event sponsored by Mr. Grace and Bethlehem vice presidents J. H. Ward, Quincy Bent, J. M. Gross, Charles R. Holton, A. B. Homer, M. L. Jacobs, J. M. Larkin, Paul Mack-

all and R. E. McMath.

"Shipways" is the dramatization of the story of ships, with special emphasis on the Bethlehem role in that story. Starting with glimpses into the past, the picture unveiled the widespread operations of the Corporation on both the Atlantic and Pacific coasts where huge Bethlehem yards in the first two years after Pearl Harbor launched 542 vessels, of which 232 were fighting craft.

The picture's cast are the thousands of workers who plan, weld, rivet, assemble, build and outfit the output of the Bethlehem wartime program of more than a thousand ships, or twenty times as many as produced before. How the plans are prepared, transferred to full-sized molds or templets, fabricated into the smaller assemblies and finally fitted together on the ship ways are a part of the pictorial portrayal which was made under supervision of the Bethlehem Shipbuilding Division headed by Mr. Homer.

J. M. Willis heads the Baltimore shipbuilding operations; S. J. Cort, the steel plant. Bethlehem has spent \$226,000,000 of its own funds in developing the plants since 1916 when the Maryland steel plant was acquired. The Baltimore Dry Dock, now the Key Highway repair plant, was purchased in 1921.

Southern Contracts Steady

(Continued from page 52)

ide by a new process.

Baytown, Texas Ordnance Plant, additional facilities, \$500,000.

Joanna Textile Mill, Goldville, S. C., \$500,000 expansion program.

William R. Warner & Co., New York, \$500,000 building at St. Louis, Mo.

Air Products, Inc., Chattanooga, Tenn., a \$500,000 expansion program.

A. G. Shore, \$350,000 cold storage and refrigerator plant at Winston-Salem, N. C.

Rustless Iron & Steel plant, Baltimore, \$302,000 addition.

Luscombe Airplane Corp., Garland, Texas, \$300,000 factory.

Florida Ramie Products Corp., Belle Glade, Fla., a \$250,000 fibre project.

Samuel M. Pistorio, a \$250,000 storage warehouse at Carroll Station, Baltimore County, Maryland.

A. C. Horn Co., Houston, Texas, \$250,000 paint, varnish and lacquer plant.

Armstrong Tire & Rubber Co., Natchez, Miss., new buildings costing \$202,569.

Tycoon Tackle, Inc., Miami, Fla., \$175,000 increase in D. P. C. contract.

Carl Muchowich, a \$150,000 quick freeze plant, Brazos harbor, Texas.

Davison Chemical Corp., Baltimore, \$140,000, equipment to produce catalyst for high octane gasoline manufacture.

Southern Aircraft plant, Garland, Texas, additional equipment, \$125,000.

Florida East Coast Railway, 30-mile cut-off between Lake Okeechobee and Fort Pierce, in Florida.

Memphis Natural Gas Co., Memphis, Tenn., two pipeline extensions totaling 112 miles.

Celanese Corporation of America, expansion, Bridgewater, Va. plant.

Interstate Pipe Line Co., 140-mile pipeline from North Baton Rouge, La., to Mallalieu Field, in Mississippi.

National Dairy Products Corp., New York, milk pasteurizing and bottling plant at Kansas City, Mo.

Byrd Committee Report

(Continued from page 37)

can be reduced to a minimum, thereby making way for an economically sound post-war era.

"That the people will hold the Congress strictly accountable for all extravagant appropriations is self-evident. Consequently it is hoped that Congress will continue to participate actively in all endeavors to restrain wasteful spending wherever it appears.

"During wartime it is the patriotic duty of all citizens to reduce their spending to a minimum. It is even more the patriotic duty of the Congress of the United States to curtail all nonessential spending.

Lift Truck Popularity Grows

Important new materials handling programs have been designed by Fred Dowling, Southern Manager for the Hyster Company of Portland, Oregon and Peoria, Illinois.

The programs, resulting from a series of surveys in Mr. Dowling's territory, involve the use of industrial fork type lift trucks in outside storage yards and especially over rough and uneven ground. The use of this equipment is increasing rapidly in the South, Mr. Dowling says.

The HYSTER COMPANY, manufacturers of pneumatic tire lift trucks with load capacities from 2,000 to 15,000 pounds and builders of the HYSTER straddle trucks, maintains southern sales and service offices in the Masonic Building in New Orleans.

Large Georgia Lumber Firm Bought by Floridians

The Reynolds Brothers Lumber Company of Albany, one of Georgia's largest lumber firms, has been sold by James E. Reynolds and Gordon E. Reynolds, Jr., to a firm headed by Louis B. Angel, of Haines City, Florida.

The company, organized in Franklin, N. C. in 1912, and later moved to Albany, owns a 30,000 acre farm in Dougherty, Baker and Calhoun counties.

Industrial Exapnsions

(Continued from page 55)

Light Co., remodeling warehouse.

VIRGINIA

BRIDGEWATER—Knitting Mill—Celanese Corporation of America, Cumberland, Md. plans enlargement of company's existing plant.

FREDERICKSBURG—Bridge—Contract let for bridge for R. F. & P. R. R. Co.

NORFOLK—Bus Station—Contract let for building for Norfolk Bus Corp.

RICHMOND—Plant—Contract let for bottling and distribution plant for Virginia Gas Industries, Inc.

RICHMOND—Building—Contract let for building for Lakeview Dairy, Inc.

RICHMOND—Addition—Rolling Pa. Bakery, 2732 W. Broad St., received bids for addition.

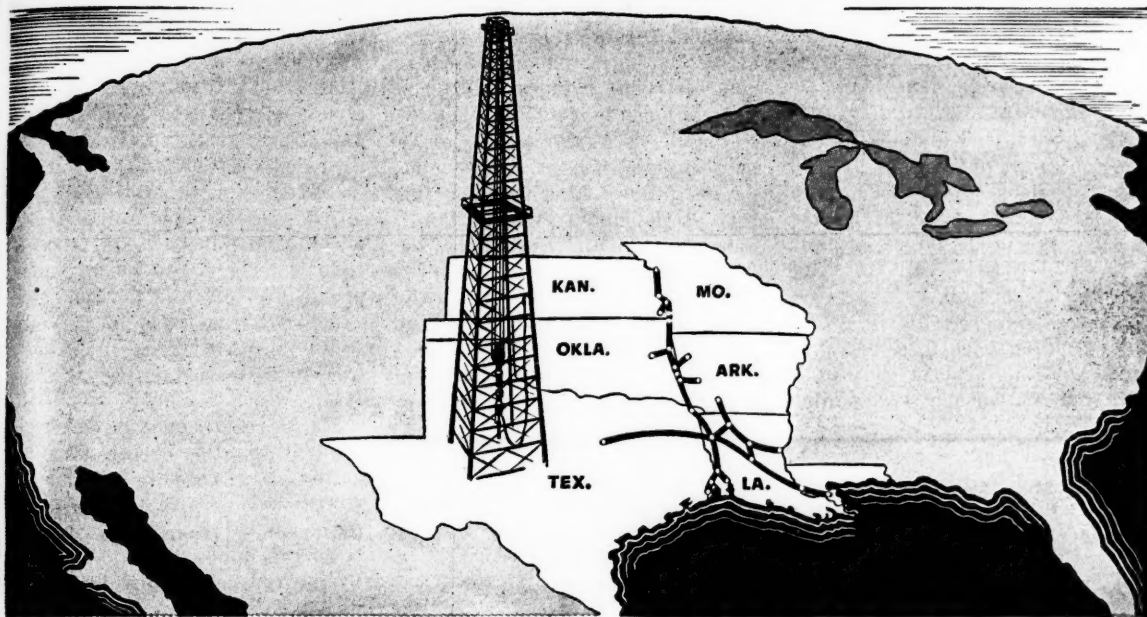
ROANOKE—Mill—Roanoke City Mills has permit to replace burned grain and storage building.

ROANOKE—Warehouse—Southern Varnish Co., has permit to erect warehouse in Norwich.

WEST VIRGINIA

NATRIUM—Plant—Carboloy Co., Inc. plans erection of \$6,000,000 factory for manufacture of tungsten carbide shell cores.

RIDGLEY—Coal Tipple—Contract let to rebuild coaling tipple of Western Maryland Railway at Maryland Junction.



53.29% of the Total World Production of Petroleum COMES FROM THE SIX STATES SERVED BY KANSAS CITY SOUTHERN LINES

The six great states served by Kansas City Southern Lines hold the "balance of power" that is winning the war. For they produce more than one-half of the world's petroleum—"key to war and peace!" With victory, the myriad and useful organic compounds created by the resourceful petroleum industry will find new and rapid peacetime applications. But petroleum—refined into high octane fuel and synthesized in great

new plants into rubber, explosives and other vital needs—is only one of many valuable resources of the territory. Here, besides material wealth in wide variety, are prosperous home markets and quick access to foreign trade through the five Gulf ports of Kansas City Southern Lines..New Orleans, Baton Rouge, Lake Charles, Beaumont, Port Arthur.



Address Development Department, Kansas City Southern Lines, Kansas City Southern Bldg., Kansas City 6, Mo., for information and cooperation.

New Orleans Port

(Continued from page 49)

The increase in coffee importations is one of the largest indications of territorial distribution. In the year 1944, the Port of New Orleans imported 5,841,085 bags of coffee, compared with 3,354,011 bags in 1935, and in the month of January, 1945, 833,217 bags of coffee arrived, which broke all previous records. Grain receipts in 1943-44 were 6,056,602 bushels, as compared with 2,697,771 bushels in 1940-41; and 7,121,682 bushels were shipped

in 1943-44, as compared with 2,293,594 bushels shipped in 1940-41.

Car loading shipments which include imports, exports, and coastwise shipments for 1943, ranked New Orleans as the second largest port in the United States. The figures follow: New Orleans, 122,200; Philadelphia, 114,297; Baltimore, 107,196, and Boston, 49,376.

A foreign trade zone is in the process of location near the turning basin on the Industrial Canal, adjacent to the Florida Avenue Wharf.

At the very heart of a great inland water system, New Orleans is favor-

ably located for any and all kinds of trade relations. This inland water way system drains, by way of the Mississippi River and its tributaries, thirty-six states of the union. The Intercoastal Canal also passes through New Orleans.

Geologists say that there is more oil, in reserve, per square mile, within 100 miles of New Orleans, than is to be found in any known province of oil, and the vast reservoirs of natural gas in this area would provide cheap fuel for a greatly increased output of industry.

As a result of the emergency brought about by enemy submarine action, New Orleans had handled more business with Latin America than ever before in its history, and is looking forward to the countries to the South as one of the most promising post war markets. New Orleans has handled more trade with them than any other United States port.

Another important factor supporting the increased trade of New Orleans is the unmatched combination of transportation facilities that it offers. Prior to the war, barge lines served points on the Mississippi, Ohio, Illinois, Missouri, Red, and Warrior Rivers, and through the Intercoastal Canal, east and west from the city, coastwise steamers offered services to the Atlantic, Pacific, and Gulf Ports. These services will be continued after the war. Air and motor transportation services have expanded also. Ocean service from New Orleans was more extensive and regular than from any other United States Port, except New York. This will be also extended after the war.

The tip of Milady's toe will be safer in "the world of things to come." She won't have to scald it off testing the bath water—or, if she normally uses her hand that'll be safe, too.

The temperature of bath or basin water can be regulated electronically, which means automatically. If you like to bathe in 100-degree water, all you'll have to do will be set the regulator and let electricity take its accustomed course. Or, if you're a 75-degree man, you can have that, too.

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Midget bathroom radios to furnish musical accompaniment by which you can sing to your heart's content.

Special health lamps; daylight lighting with fluorescents.

Heated towel racks!

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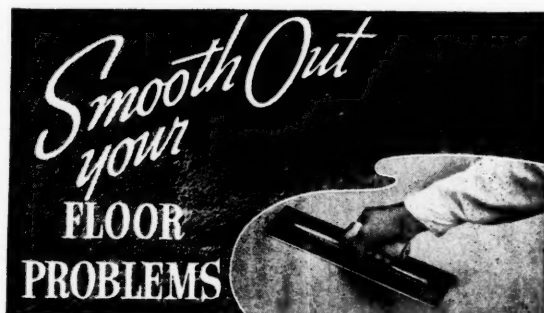
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Carbon Black

(Continued from page 51)

period contained 50 per cent more carbon black than tires made in 1928. The most recent step-up in the proportion of its use came with war-time reconversion to synthetic rubber, since tires made of the man-made product require more carbon black than natural rubber to achieve comparable performance.

Carbon black was "discovered" in 1864 by a Philadelphia ink maker named J. K. Wright. It is produced by impinging a natural gas flame against metal, then scraping the metal to collect the resultant deposit. Millions of tiny flames are kept burning day and night to turn out the nation's carbon black supply, about 88 per cent of which is produced in the Texas "Panhandle." Abundance of natural gas plus availability of waste refinery gases in that petroleum area made it inevitable that the region would become the center of the carbon black industry. Today vast clouds of black

soot tower skyward, stretching along the Panhandle horizon above the low, rambling sheds of the carbon black producers. Soot from one of these plants has been traced as far as 80 miles.

America supplies the world with carbon black. Before the war annual production of this substance averaged about 700,000,000 lbs. Because of the present expansion program, production is expected to reach a rate of between 1,200,000,000 and 1,500,000,000 lbs. a year early in 1946.

Cigarette Paper

(Continued from page 43)

for all future needs, at the same time giving farmers a new cash crop.

In addition to supplying a valued farm crop, the manufacture of cigarette paper has brought to North Carolina 1,500 jobs with an annual payroll in excess of \$2,500,000.

As the operation has expanded, other fine paper fields have been entered, among them writing and

special air mail papers. These last products, as well as cigarette paper, are marketed on a nation-wide basis.

War and American initiative, coupled with American raw materials, have brought to the South still another industry that frees us from reliance on foreign sources. Continuance of this important new industry is assured by the company's policies of unrelenting research and modern methods of employment.

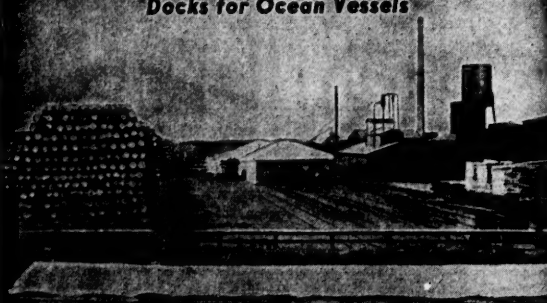
Charleston LSM's

(Continued from page 39)

quickly, made allowances for welding stresses, and how to compensate for warpage and shrinkage. They began to work under pressure of the time-table. Soon, on trucks speeding with guard over once peaceful highways, ships began moving in sections to the Charleston Navy Yard to be assembled on building ways into fighting vessels.

(Continued on page 68)

CREOSOTED
Piling, Poles, Lumber, Cross Arms,
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Also Wolmanized Lumber
Decay and Termite Proof—Can Be Painted
Docks for Ocean Vessels



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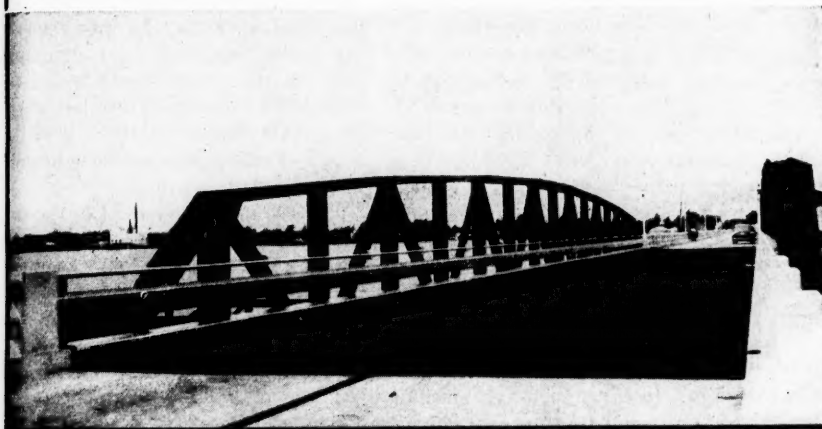


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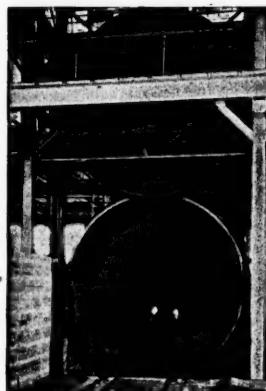
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LANCASTER IRON WORKS, INC.
LANCASTER, PENNSYLVANIA

Charleston LSM's

(Continued from page 64)

Companies on the water sent their sections via barge through the inland waterway to avoid lurking submarines. Still others loaded their sections on flat cars for a "sail" by rail.

Quickly, the incoming deckhouses, gunmounts, crews' quarters, bulkheads, etc., moving by truck over highways and by rail became a familiar sight to citizens in the little towns along the way. For the way-siders, too, this often was their first glimpse of even a part of a ship—though at first they had no idea what these massive steel contraptions were.

Charleston Navy Yard beat its schedule on delivery of its LSTs, and at the launching of the final two LSTs in January, 1943, representatives of the subcontractors were invited to the launching ceremonies as guests of the Commandant to witness the christening of their ships.

Before the completion of the LST program, it had become evident to the Navy Yard officers and to the

Naval inspectors from the office in Atlanta that the subcontractors had proven they could prefabricate ships' sections and thus speed ship production at the Charleston Navy Yard. It was evident, too, they could help further in the ship construction program of the yard.

The Destroyer Escort—the sub-buster, designed to battle the U-Boat and win the Battle of the Atlantic—was going into production. The Charleston Navy Yard had been assigned the construction of a large number of these. The same subcontractors who were doing so well on the LSTs were among those asked to participate in the DE program. They did. Then came the LSM—the invasion ships called "Pacific Puddle Jumpers," and designed to carry men and mechanized equipment on the coral islands held by the Japs. The change from DEs to LSMs marked the change of emphasis in the American war plans—from defensive to offensive. The inland subcontractors came through again.

In 1944, the Navy Yard subcontracted 4,800 tons of raw steel per month to these little plants to be

fabricated into ships' sections and shipped back to the Navy Yard for assembly quickly into a fighting unit, ready for sea. There could be no delay.

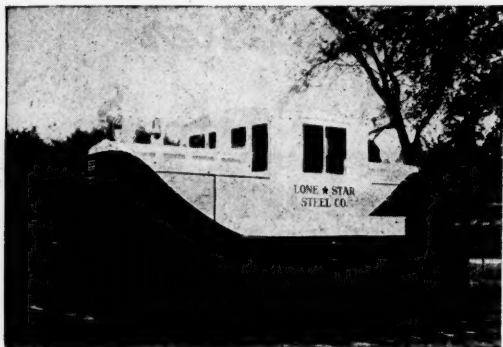
Once a subcontractor wrote the Navy Yard subcontract officer an unofficial note that he was "sweating blood" to meet Navy demands and get the ships' sections out on schedule. Constantly under pressure from the Fleet for the ships ahead of schedule, the officer merely wrote back: "So are we."

For the most part the Charleston Navy Yard's subcontractors came through in fine fashion. Four of the companies won the Army-Navy "E" pennant for excellence in war work: Carolina Industries, Sumter, S. C.; Dave Steel Co., Asheville, N. C.; Lloyd E. Jones Co., Chattanooga, and Converse Bridge & Steel Co., Chattanooga, Tenn.

Other companies would have been nominated had they not already held the "E" for work done under army contract.

Four companies have been so outstanding in their work that the Inspector of Naval material for this

(Continued on page 68)



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"The Whitcomb Diesel has proven to be eminently satisfactory, exceeding our highest expectations. This equipment hauls six charging cars up the steep grade from the charging pit, as compared to the maximum of three cars formerly handled by a steam locomotive at its prime. The Whitcomb low fuel consumption has been impressive."



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Case of 9,000, 10-grain salt tablets - - - - - \$2.60
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They deliver salt tablets, one at a time, quickly, cleanly—no waste. Sanitary, easily filled, durable.
800 Tablet size - - \$3.25



MORTON'S SALT TABLETS

Charleston LSM's

(Continued from page 66)

region (Atlanta) cited them and the Commandant of the Navy Yard invited these companies to select representatives to sponsor LSMs they had helped to build. These winning companies were Dave Steel Co., Asheville; Converse Bridge and Steel Co., Chattanooga; Carolina Industries, Sumter, S. C., and Southern Steel Works, Birmingham.

Companies which undertook the fabrication of the multi-ton steel sections for hulls, bows, sterns, deckhouses, gun mounts and the like on the Navy fighting ships are:

Virginia Bridge Co., Roanoke, Va.; Richmond Engineering Co., Richmond, Va.; Gary Steel Products, Inc., Norfolk; Bristol Steel and Iron Co., Bristol, Va.; Dave Steel Co., Asheville, N. C.; Carolina Steel and Iron Co., Greensboro, N. C.; Southern Engineering Co., Charlotte; Dixie Culvert and Metal Co. in Raleigh, Atlanta, and Jacksonville; Kline Iron and Metal Works, Columbia, S. C.; Carolina Industries, Sumter, S. C.; Greenville Steel and Foundry Co., Greenville, S. C.; Rock Hill Body Co., Rock Hill, S. C.; Converse Bridge and Steel Co., Chattanooga, Tenn.; Lloyd E. Jones Co., Chattanooga; Calvert Iron Works, Atlanta; Norman and Romer, Metal Products Corp., and R. F. Knox Co., Inc., all of Atlanta; Nashville Bridge Co., Bessemer, Ala.; Southern Steel Works Co., Birmingham; Virginia Bridge Co., Birmingham; Birmingham Ornamental Iron Works; Brunswick Marine Construction Co., Brunswick, Ga.; Merrill Stevens, and George B. Auchter Co., Jacksonville; American Machinery Corp., Orlando and Beresford, Fla., and Standard Railway and Equipment Manufacturing Co., Hammond, Ind.

Sheetmetal subcontracted work was done by the Rock Hill Body Co. in Rock Hill, S. C., and by the Budd-Piper Co. in Durham, N. C. Combustion Engineering Co., of Savannah, Ga., sub-contracted assembly of boilers. Pipebending was subcontracted to Grinnell Co., in Atlanta, Providence, R. I., and Warren, Ohio; M. W. Kellogg, Texas.

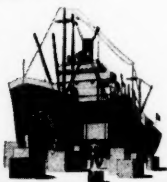
(Continued on page 70)

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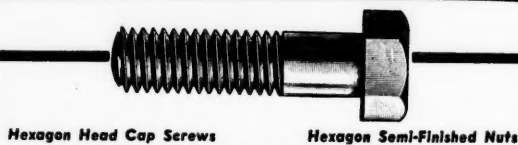
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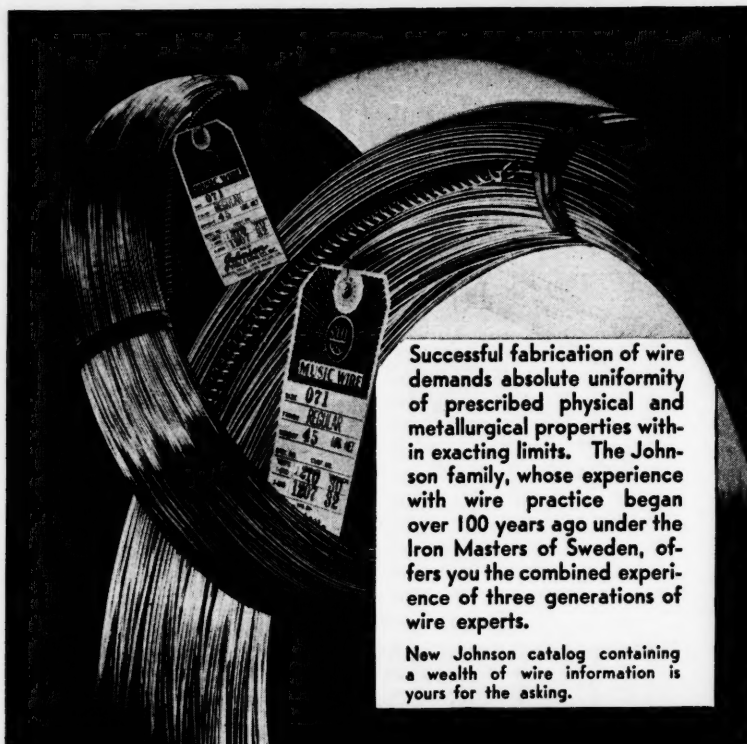


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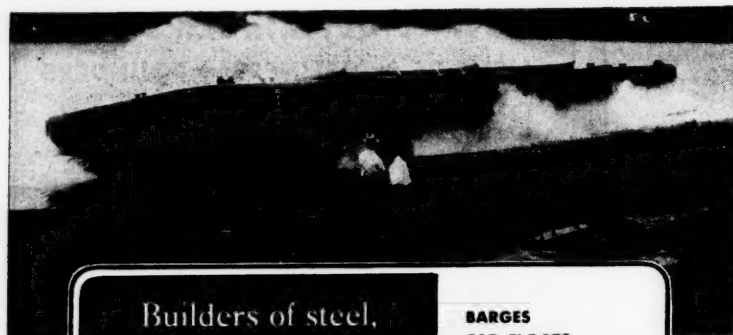


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UNITED STATES STEEL

Charleston LSM's

(Continued from page 68)

City, Texas, and New York; Lloyd E. Jones Co., Chattanooga, and the Crane Co., Atlanta.

This subcontracting of ship construction, worked out by the Charleston Navy Yard officials, with the advice of the Industry Cooperation Division, Office of Procurement and Material, and supervised and inspected by the officers of the Office of the Naval Inspector in Atlanta and other districts, was arranged to give everything possible to the smallest company that could handle the job. The procedure distributed the work load, supplied war jobs to many little companies and tended to put work in vicinities where housing was still available, thus relieving crowded conditions on the coast.

Among Us Southerners

(Continued from page 48)

munities. We can be the authors of our own future progress.

If we believe, in spite of the record, that all is well with the South, we need not bestir ourselves. If we believe industry will come to us without effort, in the face of attractive surroundings elsewhere, we need not waste our energy. If we believe no change in agriculture is inevitable, we can sit and wait.

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Cottonseed

(Continued from page 42)

a soil-depleting crop, and the restoration of soil fertility by crop rotation and the balancing of cotton with livestock enterprises have been important phases of every program of the rehabilitation of Southern agriculture. In carrying out any such soil building program cottonseed could be an important

factor. Most of the plant-food elements lost by the soil in the production of cotton are fixed in the seed and not in the lint. These elements could be restored to the soil by the direct or indirect use of cottonseed products as fertilizing agents. During 1942 more than 9,000 tons of cottonseed meal was applied as fertilizer on cotton farms in Sixth District states. What is generally considered a better practice, how-

ever, is to feed cottonseed meal to cattle and other livestock as a high-protein supplement to other feeds and then to recover the animal manure for use on the soil. In this way from 65 to 85 per cent of the plant-food elements would be returned to the soil and, in addition, the diet of the region could be improved by an increased consumption of dairy and livestock products."

The opportunity to put into effect Mr. Bauber's advice, as well as every other idea for the expanded use of cottonseed is bound up with and incidental to the future of cotton as a fiber. It is intended here only to point out the fact that in meeting the highly complex demands of the post-war no complete solution of the cotton problem can be approached without due recognition of the importance of cottonseed in the National economy.

If mechanization of cotton production can reduce the cost and the selling price of the crop, thus greatly increasing the yield of both fiber and seed, the latter, for its part, will be found no laggard in gaining increased consumption.

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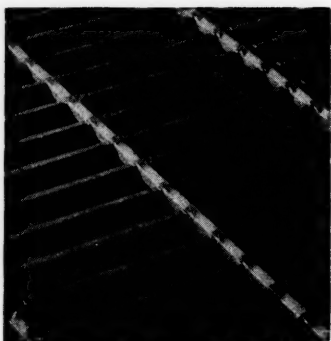
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Tung Oil

(Continued from page 47)

tree growth because of possible cold weather during the winter.

Tung trees have been grown on a wide variety of soils. Experience has shown that they are very exacting from the viewpoints of drainage, aeration and soil fertility. Tung fruit can be produced economically only when the trees are planted on the best soils available, preferably those having a sandy loam surface underlain by a well-drained and aerated, permeable clay sub-soil within one foot of the surface.

Tung trees are heavy feeders and require large quantities of the mineral elements for growth and fruit bearing. These characteristics are supplied only by the most suitable soils. Tung trees are very susceptible to injury from water-logged or flooded condition of the soil, even for a short period of time. Soils inclined to be wet should be avoided, as well as those with a low water-holding capacity as the latter do not provide an ample supply of moisture. (S.A.L.)

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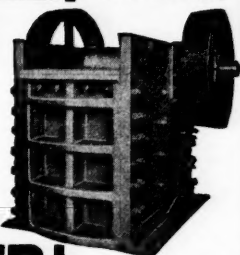
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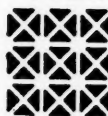
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Army Crash Trucks Use Davey Take-off

Many Army crash trucks operate with only one motor, employing the Davey truck power take-off, a product of Davey Compressor Co., of Kent, Ohio, to transmit power from the truck's engine to the high-pressure pumping equipment. This arrangement saves the cost of an auxiliary engine, plus the extra space it would require, and greatly reduces the overall weight. Located back of the transmission as an integral part of the truck drive shaft, the Davey Heavy-Duty Truck Power Take-Off can be installed to provide either separate or simultaneous operation of truck and equipment.

Besides satisfying Army requirements for crash trucks, the Davey Heavy-Duty Truck Power Take-Off is designed to handle power transmission from truck engine to auxiliary equipment in nearly all truck models of 1½ ton or more capacity, with wheel bases of at

least 117" for cab-over-engine types and 134" for conventional cab types. Davey Compressor Company, Kent, Ohio, will gladly supply Power Take-Off literature at your request.

Goodrich Operators Handbook

B. F. Goodrich Company, Akron, Ohio, has just published the Operators Handbook, which is now available upon request.

Pocket-size, the 96-page handbook is filled with pertinent data on each of the tires which the company makes for commercial service. This data is in condensed, easy-to-read form, and follows the description of the individual tire itself, so that no time need be wasted in looking for the information. A comprehensive index increases reading ease.

One section deals with the eight factors which affect truck tire life. These factors are listed as: loads carried, air pressure, speed, matching of duals, load distribution, rims,

size and condition, wheels, brakes and springs, and how the vehicle is driven. In each of these chapters are discussions which may be found in truck operation and what can be done to correct the faults.

Another chapter of the booklet is devoted to instructions on how to mount synthetic tubes correctly, and the application of synthetic tubes and flaps. Tube, valve and flap data for all size tubes are included, as well as recommended practice for rims and dual spacings.

Flexible Stainless Steel Tubing Now Available

Chicago Metal Hose announces the addition of a 6" I. D. size to its line of Rex-Flex Stainless Steel Flexible Tubing. Designed to meet many new requirements of both industry and aviation, this latest addition increases the range of available Rex-Flex sizes from 5/16" to 6" I. D., inclusive.

The new 6" size thus adds to this line of corrosion-resistant, liquid and gas-tight flexible metal tubing—making a total of 16 different sizes and 5 types of wall structure available.

Rex-Flex stainless steel units are finding increasing favor throughout industry because of their non-corrosive durable and pressure-tight characteristics. Also, Rex-Flex is bendable in multiple planes for easy installation and long flexible life.

New Combustion Heater

Herman Nelson Corp., Moline, Ill., announces a new type gasoline burning heater known as Model AT-1000 vehicle heater. Designed primarily for application to heating requirements in vehicles and other ground equipment, it serves equally well as a space heater for personnel comfort or as a pre-heater for warming up various types of machinery preparatory to operation in very cold weather.

Heat output is 20,000 BTU. The unit measures 15" in length, the diameter of the outer shell being 6¼". Weight is 17 pounds. Powered by an integrally designed fan and electric motor. Installation requires only a supply of fuel and a source of electricity. Operation is automatic, being remotely controlled by a simple on-off switch.

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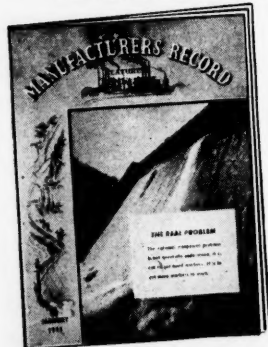
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